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Dynamics of fertility and partnership in Europe

Insights and lessons from comparative research

Volume I

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Edited by
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EXPLANATORY NOTES

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The following abbreviations have been used:

CBGS	Population and Family Study Centre
CES	Conference of European Statisticians
CIS	Commonwealth of Independent States
EAPS	European Association for Population Studies
FFS	Fertility and Family Survey
GGP	Generations and Gender Programme
ISCO	International Standard Classification of Occupations
ISCED	International Standard Classification of Education
IUSSP	International Union for the Scientific Study of Population
IWG	Informal Working Group
PAU	Population Activities Unit
SCR	Standard Country Report
SRF	Standard Recode File
TFR	Total fertility rate
TFMR	Total first marriage rate
UNECE	United Nations Economic Commission for Europe
UNFPA	United Nations Population Fund
WFS	World Fertility Survey

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Preface

The Population Activities Unit (PAU) of the United Nations Economic Commission for Europe (UNECE) conducted the Fertility and Family Survey (FFS) project between 1988 and 1999 in close collaboration with national population research centres, statistical offices and university departments from 23 UNECE countries plus New Zealand. As the project drew to a close, it was decided to organise a major end-of-project scientific conference, where initial results of comparative research drawing on the FFS data and related information were to be presented.

This led to the convening of the FFS Flagship Conference, which was organised by the PAU, the Population and Family Study Centre (CBGS) of the Flemish Community and the United Nations Population Fund (UNFPA). The Conference was held during 29-31 May 2000 in Brussels under the auspices of the European Association for Population Studies (EAPS). The European Commission (Directorate General for Employment and Social Affairs) sponsored it.

A few international population conferences held during the second half of the 1990s featured sessions at which papers based on the FFS material were presented. These included the two general conferences of the EAPS – those held in Milan (Italy) in 1995 and The Hague (Netherlands) in 1999 – as well as the general conference of the International Union for the Scientific Study of Population held in Beijing (China) in 1997. The FFS Flagship Conference was, however, the first scientific event that was almost entirely dedicated to comparative research derived from the FFS data.

The five themes for the Conferences were:

(i) partnership behaviour
(ii) fertility behaviour
(iii) partnership and fertility behaviours as interdependent processes
(iv) new approaches and methodological innovations in the study of these behaviours
(v) research and policy agendas for the future.

The material presented to the five thematic sessions included solicited and contributed papers. This volume contains a selection of the solicited papers. The accompanying Volume II includes a collection of the contributed papers.

Most of the initial ideas for the development of the FFS project originated with a small group of demographers from a number of European research, academic and statistical organisations. At the core of this group were demographers from the CBGS. It was, therefore, fitting to hold the end-of-project conference at their headquarters in Brussels. The CBGS as conference host worked closely with the PAU to made the event a success.

Many individuals and institutions contributed to the success of the FFS project and the Conference and whose contributions are hereby gratefully acknowledged. They included members of the FFS Informal Working Group (IWG) and numerous other colleagues involved in FFS activities in the participating countries. Among them were the members of the FFS Advisory Group on Comparative Research, who also acted as members of the Organising Committee for the Conference. They also include the two FFS Project Managers, Erik Klijzing and Martine Corijn, who kept the project on a steady course through to its completion.

Success of long-term international projects like the FFS is critically dependent on sustained international financial support. In the case of the FFS, support came from the UNFPA. Although small in comparison with the combined financial inputs of the

participating countries, the UNFPA funding for the project proved immensely important, especially in support of the PAU's co-ordinating role. It enabled the project to be launched, sustained and successfully completed. As preparations for the Flagship Conference got under way, the UNFPA funding for the Conference was complemented by the European Commission. The contributions of these two institutions, which made the Conference possible, are gratefully acknowledged.

Special thanks are due to the conference participants and, in particular, to the authors of the papers included in the two volumes. We hope that their contributions and the publication of the volumes will serve as an impetus to further FFS research.

Last but not the least, thanks are due to those who helped prepare this volume for publication. Marion Burkimsher performed linguistic editing. Jelena Torbica worked on the layout of the volume and formatted the material. Sylvia Dick proofread all the chapters.

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Overview of the FFS project

This volume is a product of the Fertility and Family Survey (FFS) project, which was conducted between 1988 and 1999 by the Population Activities Unit (PAU) of the United Nations Economic Commission for Europe (UNECE), with financial support from the United Nations Population Fund (UNFPA). The objectives of the project were:

- to conduct comparable Fertility and Family Surveys in UNECE member countries;
- to create and archive FFS Standard Recode Files (SRFs);
- to prepare FFS Standard Country Reports (SCRs);
- to carry out a programme of cross-country comparative research.

The national-level FFS activities that were centrally co-ordinated by the PAU included the following: the design of national questionnaires, data entry, preparation of the SRFs, drafting of the SCRs and the undertaking of cross-country comparative analyses. National FFS activities that were not co-ordinated included the sampling design, fieldwork methodology and the preparation of reports and studies in national languages.

Various bodies supported the FFS project. The key among them was the FFS Informal Working Group (IWG), which included representatives of all national institutions that took part in the project. The FFS Advisory Group on Comparative Research monitored the FFS comparative research programme. The FFS Archiving Group kept the documentation on the project up to date. Late in the project, the Conference of European Statisticians (CES), an intergovernmental body that has been overseeing the PAU's work in the field of demographic analysis since 1998, supervised the implementation of the project.

FFS surveys were conducted in the following 23 UNECE countries plus New Zealand: Austria, Belgium, Bulgaria, Canada, Czech Republic, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Netherlands, Norway, Poland, Portugal, Slovenia, Spain, Sweden, Switzerland and the United States of America.

The surveys have generated a wealth of information enabling a better description and explanation of recent changes in partnership and fertility behaviour in this part of the world. Research based on the FFS data has resulted in many publications. Twenty-two Standard County Reports have been prepared and published. Over a hundred comparative research projects have been approved, entitling researchers carrying them out access to individual-level FFS data. Many of these projects have given rise to conference papers, articles in journals and other publications. The FFS project participants and other interested parties have been kept abreast of these and other FFS project developments by means of the FFS Newsletter.

The FFS project was brought to a close at the end of 1999. To mark the event, the FFS IWG decided to organise an end-of-project conference. The FFS Flagship Conference became an occasion for many researchers to present their findings of comparative analyses based on FFS data, in particular those studying partnership and fertility behaviour. The conference was held from 29 to 31 May 2000 in Brussels (Belgium) and was hosted by the Population and Family Study Centre (CBGS). The programme of the FFS Flagship Conference is reproduced in an annex of this volume.

More information on the origin and history of the FFS project, its achievements and limitations can be found in the contribution to this volume by Robert Cliquet and at the FFS website, www.unece.org/ead/pau/ffs. An appraisal of the FFS database from a comparative perspective is available in the contribution to this volume by Patrick Festy and France Prioux and in their detailed evaluation which was published by the United Nations in 2002.

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CHAPTER 1

FERTILITY AND PARTNERSHIP: WHY THE FFS AND WHAT DID WE LEARN FROM IT?

Miroslav Macura[*] *and Gijs Beets*[**]
with
Marion Burkimsher[***]

A. INTRODUCTION

This volume presents selected contributions to the FFS Flagship Conference solicited by the Organising Committee of the Conference. The second volume presents contributions received in response to a call for papers issued by the Organising Committee. The full programme of the Conference is reproduced in Annex 1 to this volume.

The chapters comprising this volume make a collage of contributions. In his introductory remarks, Van de Kaa (Chapter 2) sets the stage for the Conference by focusing on low fertility and its underpinnings. Cliquet (Chapter 3) recalls the history of the FFS project and evaluates its achievements and limitations. Macura *et al.* (Chapter 4) review salient fertility and partnership developments in eastern and western Europe since the late 1980s. Kiernan (Chapter 5) examines the changing patterns of union formation and dissolution across Europe. Pinnelli *et al.* (Chapter 6) examine two-way effects of reproductive and partnership behaviour in countries representing four zones of Europe plus North America. Courgeau (Chapter 7) evaluates analytical methods used in studies of reproductive and partnership behaviour and suggests how their future uses could enrich understanding of reproductive and partnership behaviour. Festy and Prioux (Chapter 8) scrutinise the achievements and shortcomings of creating the international FFS database. Hobcraft (Chapter 9), discouraged by the lack of progress in theoretical and empirical research into reproductive and partnership behaviour, proposes a design for a longitudinal survey-based research project examining the transition to parenthood. Lastly, in his concluding remarks to the Conference, Coleman (Chapter 10) takes a critical look at the achievements and shortcomings of the FFS and suggests how research into fertility and partnership behaviour could be advanced.[i]

An express objective of the FFS was to contribute to knowledge on changes in reproductive and partnership behaviour and their underpinnings in Europe and North America since the 1960s. Some significant contributions to this knowledge are contained in this volume, others in the companion volume and yet others were published elsewhere. The following section of this chapter (B) describes the new patterns of reproductive and partnership behaviour, highlighting aspects of the new knowledge as presented in this volume. As these new patterns are of interest to us because of their major repercussions for populations and families, the subsequent section (C) briefly discusses these. Moving from a description of behaviour patterns and to the tools used to research these, section D describes the origins of the FFS project and its principal aims. The specific aims, design and implementation of the FFS made progress in understanding

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demographic processes possible, but also set certain constraints on the advancement of knowledge in this field. Section E seeks to draw lessons deriving from these constraints that may be useful to future research in the field. Section F outlines how the FFS successor – the Generations and Gender Programme – seeks to successfully expand the vision of past survey projects. The chapter ends on an expectant note, as now not only demographic researchers but also policy makers are perceiving the need to actively pursue research in this field.

B. NEW BEHAVIOUR PATTERNS

1. Sub-replacement fertility

Over the last four decades, period fertility rates have descended to sub-replacement levels in all but a few European and North American countries. In western, northern and southern Europe, and across the Atlantic, the decline occurred after the middle of the 1960s, the time the post-war baby boom came to an end. In central and eastern Europe, fertility decline was by and large confined to the period after 1989. The period fertility rates are currently scattered across a wide spectrum. At one end, for example in France, Ireland, Norway (Council of Europe, 2000) and the United States, they are at levels, which, if maintained, could nearly ensure replacement of generations. At the other end of the spectrum – e.g. in the Czech Republic, Russian Federation and the Ukraine – if they were to persist, barely one half of generations would be replaced. Southern European countries (Italy, Spain and Greece) also have some of the lowest fertility rates currently on record.

Van de Kaa (Chapter 2) proposes that it may be possible that period fertility rates could fall even lower, perhaps to an ultimate low of 0.75 children per woman. This would happen if 20 to 30 per cent of women choose to remain childless and the remainder stop after having just one child. The burning question is why have fertility rates fallen so much? Van de Kaa suggests that it is the spread of post-modernism, where choices are increasingly based on quality of life issues and the desire for self-fulfilment. New forms of partnership behaviour – cohabitation and divorce – are associated with lower fertility, although the effects vary country to country, as described in Kiernan (Chapter 5) and Pinnelli *et al*. (Chapter 6). Macura *et al*. (Chapter 4), attribute the dramatic falls of fertility in many central and eastern European countries since the late 1980s to the economic hardship following the fall of the communist regimes. Coleman (Chapter 10) offers other explanations of low fertility, such as low welfare support, unavailability of childcare, inequality of the sexes and high female participation in the workforce, although the case of the United States, where fertility levels are markedly higher than in Europe, is an interesting counter-example. Hobcraft (Chapter 9) highlights the lack of understanding of if, why and when people choose to become parents. He suggests that a new survey framework should examine this question specifically. Coleman suggests that explanations should also be sought from experts in a wide variety of other disciplines, from evolutionary biologists to economists and from political scientists to researchers in genetics.

2. Birth control

Fertility levels could never have fallen to such low levels without the widespread use of effective birth control methods. In an earlier work, Van de Kaa (1997) identified modern contraceptives as the means that made low fertility possible but also acted as a catalyst of behaviour that led to it. In Chapter 4, Macura *el al.* overview the way women were controlling fertility during the 1990s, and describe how their choices regarding birth control methods varied widely from country to country. In some western European countries, contraceptive practices are almost universally effective, with a mix of modern methods – the pill, condom and the IUD in particular – each playing its part. In eastern Europe, the available information suggests that traditional methods, or no method at all, are the rule in many countries, especially in the easternmost ones, leading to excessively

high abortion rates – more than 50 induced abortions per 100 known conceptions. One cannot but wonder as to whether induced abortion on demand might have begun playing a catalytic role of its own as the new fertility behaviour emerged in these countries in the 1990s.

3. Extramarital childbearing

Extramarital childbearing has been rising in recent decades in many western and northern European countries as well as in North America. In central and eastern Europe similar developments have occurred, but mainly in the last decade or so. In 1997, for the leaders in this trend – Sweden and Estonia – over 50 per cent of children were born outside marriage (Macura *et al.*, Chapter 4). Many of these births, however, are to couples in long-term cohabiting relationships. Births to women who are not in partnership are considerably rarer, though they reach a level of over 20 per cent for first children in the United States (Pinnelli *et al*., Chapter 6). In southern Europe, out-of-wedlock childbearing, however, still remains very rare. Fewer than 10 per cent of children were born outside marriage in Greece and Italy in 1997. Switzerland and several eastern European countries have similar levels (Macura *et al.*, Chapter 4). In many countries of Europe, non-marital cohabitation is widely accepted before children are born, but when planning or expecting a child, many of these relationships are transformed into marriages (Pinnelli *et al*., Chapter 6).

4. Later childbearing

Another noted trend is the increasing postponement of entry into parenthood (Macura *et al*., Chapter 4). The trend was led by the countries that were forerunners in the movement towards sub-replacement fertility (e.g. some of the Scandinavian countries and the Netherlands followed by Italy and Spain). At present, in a number of them, the average age at first birth among women is approaching thirty. The easternmost countries of the region are lagging far behind in this trend. Some of them have seen a shift towards later entry into motherhood, but only in the last few years.

Not only are first births happening later, subsequent children are also being postponed, as described by Pinnelli *et al*. in Chapter 6. However, from comparing cohorts in five different countries (Italy, Hungary, France, Sweden and the United States), they noted that once the first child has been born, having a second and even a third is more frequent than before, even if these births are delayed.

The spread of childlessness, another salient development, took on major proportions in only a minority of European and North American societies. In those that have emerged as trendsetters, about one in five women who have recently completed their fertile life have no children (e.g. Germany and Switzerland). The conclusion reached by Pinnelli *et al*. in Chapter 6 is that there may be an increasing polarisation of the population into ‘family types’, with slightly larger families than before, and ‘non-family types’ with no children.

5. Retreat of marriage

Attendant shifts in partnership behaviour have been equally momentous. These are discussed at length in Chapters 4, 5 and 6 of this volume. In western countries, the post-war pattern of relatively early and almost universal marriage began to wane by the middle of the 1960s. A decline in period first marriage rates ensued, and this typically occurred in tandem with a drop in fertility rates. Similar developments took place in eastern countries, though only some 25 years later. If such low marriage rates persist, the result will be that only about one half of women will ever get married in such countries as Sweden (Macura *et al*., Chapter 4). In addition to the retreat from marriage, the frequency of entering into any type of partnership is also dropping in some countries. In West Germany, Italy and Spain a quarter or more women in their late twenties have never had a spouse or cohabiting partner, though the figure is much lower in the northern

countries (Kiernan, Chapter 5). A significant minority of people not in a co-residential partnership, do, however, have an intimate relationship; sometimes they do not co-reside because of constraints, at other times by choice (Kiernan, Chapter 5).

6. Later marriage

There has also been a trend towards increasingly later entry into marriage. In countries that set this new trend, such as Denmark and Sweden, the mean age of women at first marriage recently approached 30. As with the later entry into motherhood, some of the easternmost European countries have seen the trend towards postponement of marriage only in the last few years. In yet others, there has been little change in the age of first marriage, with the average being just over 22 in Russia and Belarus (Macura *et al*., Chapter 4).

However, the proportion of those never-partnered by age 25 has not changed significantly over the past decades. The marked change in the never-married population observed in the northern and western European countries is less to do with the avoidance of partnerships and more with the substitution of marital unions by cohabiting unions. In several eastern European countries there may have been similar changes among younger cohorts, since there is now evidence of a trend to a later age at marriage (Kiernan, Chapter 5). Pinnelli *et al*. (Chapter 6) add that postponement of entering a union mirrors an attitude which is different from the norm and less favourable to procreation.

7. Cohabitation

As the attraction of relatively early, universal and stable marriage waned, non-marital cohabitation spread, although this has not occurred everywhere. The Scandinavian countries have led the trend, with nine out of ten women choosing cohabitation as their first union, whereas in Spain and Italy a similar majority choose marriage as their first union. This is closely associated with the differing patterns of living arrangements for young adults. In the Nordic countries few women in their early 20s live with their parents, with many living alone or in non-marital partnerships. In contrast, in the Mediterranean countries, the vast majority of this age group of women live with their parents; less than two per cent live alone and less than 5 per cent cohabit. In eastern Europe, women generally choose to enter partnerships early, and these are still usually marriages (Macura *et al*., Chapter 4).

In Sweden there is a tradition of long-term cohabiting, where only one in three cohabitations become marriages within five years of the start of the partnership. In most other countries, one in two cohabitations are converted into marriages by the first anniversary of the union (Kiernan, Chapter 5). Commencing a first union with cohabitation is somewhat more common among the most highly educated groups within a population. Cohabitation is also associated with the more secular groups.

Across Europe, divorce was on the increase up to the 1980s, since when rates have tended to stabilise, probably because of cohabitations becoming more widespread among the young. In all countries, cohabiting unions that do not convert to marriages are the most fragile unions. In many countries there is evidence that marriages preceded by cohabitation are more fragile than direct marriages (i.e. those not preceded by cohabitation), but this is not universal. Young people are more likely to enter a cohabiting relationship rather than direct marriage if they experienced the marital breakdown of their parents. These children of ‘broken homes’ are also significantly more likely to experience partnership breakdown of their own in adulthood (Kiernan, Chapter 5).

8. Behaviour interactions

The shifts to new forms of reproductive and partnership behaviour have been interacting in different ways. These variations are discussed in detail in Macura *et al*. (Chapter 4) and Pinnelli *et al*. (Chapter 6).

For example, in northern Europe and parts of western Europe, the spread of non-marital cohabitation and non-marital childbearing were part and parcel of the same process. Younger people are increasingly finding it preferable to cohabit and, if the union endures, have a child and perhaps marry. In southern Europe, neither non-marital cohabitation nor non-marital childbearing are seen as options for the vast majority. In parts of western Europe, even where it is relative widespread, non-marital cohabitation for many is still not an appropriate family environment within which to have a child. Central Europe and the Baltic area of eastern Europe mirror this variety of ways in which non-marital cohabitation and non-marital childbearing are combined.

Any form of union other than direct marriage is associated with a lesser and later probability of having a first and second child. Pinnelli *et al*. (Chapter 6) found that in Italy, Hungary and the United States it is more common to enter into a union in order to have children, whereas in France and Sweden young people often enter a union without any immediate reproductive plans. Informal unions and union instability favour the delay of procreation and lower fertility. In turn, childlessness and low fertility favour informal unions and the instability of unions. The strength of the relationship between new union patterns and low fertility behaviour is greatest where social and cultural transformations are most recent.

C. REPERCUSSIONS

1. Population ageing

The behavioural changes in question have left and continue to leave lasting marks on population trends. Largely as a result of the historic and recent declines in fertility, the populations of today are older than they ever have been. In countries that experienced strong baby booms, ageing will noticeably accelerate in the next few decades as the baby-boomers – those born roughly between 1945 and 1965 – enter old age. What may lie beyond, namely towards the middle of the 21st century, cannot be foretold with any great degree of accuracy. However, the fact that period total fertility rates have descended in a number of countries to just above one child per woman and do not show any significant signs of recovery may mean that the proportion of people aged 60 and over will surpass one-third by 2050 in some of the lowest fertility countries (e.g. in Italy and Spain). In these countries, one person in eight may be aged 80 or over by this date (Macura *et al*., 1999). On the other hand, in countries where fertility was and is relatively higher, the general pace of population ageing over the next five decades will not be as extreme.

2. Population decline

Under the low mortality conditions that prevail throughout much of Europe, the other major demographic implication of low fertility is the levelling off and onset of decline of the population. In large parts of eastern Europe, partly due to relatively high mortality by European standards, declines had already started around 1990 (Council of Europe, 2000; Kučera *et al*., 2000). The declines were particularly rapid in cases where losses through emigration were greater than gains through immigration. In western Europe, most countries continue to experience, albeit very slow, population growth. This is often a result of a slight excess of births over deaths plus significant net gains due to immigration (Council of Europe, 2000). Without net immigration, Germany and Italy would have already experienced the onset of population decline during the 1990s. As time passes, low fertility and the momentum of decline will join forces to overpower the effect of immigration. Projections by the United Nations (2001) assume that in the future net immigration will continue and that fertility will rebound but not return to replacement levels, leading to some very low-fertility countries losing between one-quarter and one-third of their populations by the middle of the 21st century. Other countries will enter this phase after a delay. However, population decline will have major

implications for society, including the economy, the labour and housing markets, and the social security system.

3. Family change

Along with populations as a whole, families are also undergoing profound changes caused by new reproductive and partnership behaviour. Families of today are as a rule smaller than those of a generation ago. On average, they consist of a larger number of generations of kin – increasingly four generations. However, each subsequent generation has fewer members than the preceding one. The structure of these families by age or generation is increasingly top-heavy. In sum, like aggregate populations, multigenerational families are both ageing and becoming smaller. In addition, family units that co-reside are also typically smaller, older and more diverse than those of a generation ago. For example, there are more married or cohabiting couples with no children – either because they are 'too young' to have children or because they are 'too old' to still have children at home. There are also more one-parent families and reconstituted families, and many more single person households. Correspondingly there are fewer archetypal families consisting of a co-residing married couple and their children. As the complexity of the family increases, so do relationships among its members and these changes are highly likely to continue into the future.

4. Governmental reactions

Governments are closely watching the repercussions of these developments, as it is primarily up to them to understand their implications for individuals, families and societies and develop policies and programmes that will enable them to adapt to the changes. As Coleman discusses in Chapter 10, a major challenge to society is the financial burden of the new patterns in partnership and fertility, which are leading to an increasing number of one-parent and reconstituted families – one that may well not be economically sustainable with an ageing population.

Very seldom up to now have democratic governments tried to directly influence partnership and reproductive behaviour. It is an open question whether or not this will remain so. In the meantime, however, some governments – especially in countries with very low fertility – are keenly interested in new information and knowledge on reproductive behaviour patterns and the factors influencing them. It may be that in time this new knowledge will be exploited in order to influence behaviour. Whether such attempts would meet with success is a question on which there are major disagreements in both research and policy circles. Nevertheless, given the salient repercussions of the new behaviour patterns, their study is likely to be increasingly in demand.

D. WHERE DID THE FFS COME FROM?

From looking at the new developments in reproductive and partnership behaviour we now turn to examining how demographers and other social scientists have taken up the challenge of documenting and explaining them.

Among others, Becker (1981) and his followers formulated and tested the 'new home economics' theory in an effort to explain evolving patterns of childbearing and marriage, particularly in the USA. Easterlin and Crimmins (1991) hypothesised that it was increasing relative economic deprivation that initiated the American post-baby-boom fertility decline. While American scholars placed emphasis on economic reasons of the new behaviour, their European counterparts looked for answers elsewhere. Lesthaeghe and Van de Kaa (1986) and Van de Kaa (1987) attributed complex shifts in reproductive and partnership behaviour in western Europe particularly to ideational changes.[ii] Empirical support for alternative hypotheses was sought in aggregate level data. Individual level survey data needed for testing the new theories and hypotheses were by and large non-existent at the time and only became available in the 1990s.

In 1987, as documented by Cliquet (Chapter 3), the UNECE Regional Meeting on Population and Development made recommendations for a new round of comparative fertility and family survey data collection and research. The proposals for the project were subsequently developed by the CBGS in Belgium – and the FFS was born. Unlike its two predecessors, as discussed by Festy and Prioux (2002), the FFS was an innovation in that it was driven by the demographic research community and not by government concerns (Van de Kaa, forthcoming). It sought to help understand the spreading key manifestations of the so-called Second Demographic Transition in Europe. Compared with its predecessors, which focused on fertility, the FFS expanded the scope of data collection and enquiry to encompass both reproductive and partnership behaviour as well as their interrelationships. It perceived the two as being influenced by and affecting education and work. It recognised that values and beliefs have a bearing on these two aspects of behaviour. It chose to study them in a life course perspective by collecting relevant event histories of unrelated women and men in their reproductive years by means of one-time cross-sectional surveys and to analyse them using event-history methods. It also intended to shed light on how expectations pertaining to childbearing and partnerships might be influenced by family policies.

E. WHAT LESSONS CAN WE DRAW FROM IT?

The two FFS predecessors – the Comparative Fertility Surveys (CFS) and the World Fertility Surveys (WFS) conducted in the UNECE countries – had plenty in common with the FFS. Nevertheless differences among the three projects were striking. As one succeeded the other, appreciable improvements in data collection and technical analysis occurred, but occasional setbacks also took place. The co-ordination of data collection, with the express aim of data comparability increased. The accessibility to the data grew by leaps and bounds, culminating in the unrestricted access to the FFS Standard Recode Files (SRFs) for *bona fide* researchers. The circle of researchers expanded from a tiny, closed group at the PAU associated with the CFS to a large number of analysts using the SRFs in many countries over the world. The initial, paramount focus on reproductive behaviour widened to encompass partnership behaviour, as well as interactions between the two. Explanatory analyses making use of increasingly sophisticated methods began to overshadow solely descriptive works. Unlike its predecessors, the FFS began by seeking to rigorously identify its research objectives, rather than by plunging straight into questionnaire development and data collection.

Clearly, the above suggests, the FFS outshone its predecessors. No matter how one looks at it, this is not particularly surprising. One of the reasons is that the FFS had the predecessors to learn from. Lessons might not have been drawn in a systematic manner, yet they were tangible and useful. They helped the FFS make critically important choices that created new opportunities for expanding the knowledge of reproductive and partnership behaviour. At the same time, they set constraints on progress towards this lofty objective. It is the latter – and the more important ones – that we will focus on below. Lessons need to be drawn from the FFS and applied by its successors. Hopefully, the successors will do better than their forerunners.

1. The FFS design

The key FFS choices resulted in an ‘FFS universe’ at the core of which were individuals and their behaviour. The confines of this universe, it appears in hindsight, were rather constricting: they did not reach beyond the four interrelated processes (forming or dissolving unions, having children, being in formal education and participating in paid work). Thus, at best, the FFS design made it possible for the research demographer to study one of the two types of behaviour of the individual – reproductive or partnership behaviour –

in conjunction with the other one, and in combination with education and labour market behaviour. In essence, it confined any explanatory model to at most three 'explanatory variables', too few to support a deeply insightful analysis.

Hobcraft in Chapter 9, writing about the WFS and FFS, stated that, among other things, "the very limited range of determinants of fertility (or whatever other demographic process being considered) which have been included" "lie at the heart of our lack of progress towards" relevant theoretical insights. Both he and Ron Lesthaeghe argued in favour of downplaying (in Hobcraft's words) an "ever more detailed analysis of the minutiae of event history information and its interplays" in favour of progress "in refining and improving the range and depth of 'background' [or explanatory] variables" and bringing them into analysis. Festy and Prioux (Chapter 8) and Macura (2002) suggest directions in which the search for appropriate variables could be pursued. They can be found in three domains – micro, meso and macro – in other words, at the levels of individuals, their families and support networks, and their communities. They should also reflect conditions that both define opportunities for and set constraints upon the options an individual can choose between.

Related to this are the views of those who are sceptical about event-history analysis *per se*. As Festy and Prioux (Chapter 8) perceive it, the problem was that the FFS design led "to an interpretation of individual behaviour by individual determinants". Courgeau (in Chapter 7) refers to this problem as the "atomic fallacy", an approach that ignores the context in which human behaviour takes place. Coleman (Chapter 10) raises the question as to whether micro analysis should be paramount and concludes that the use of event-history methods with mostly proximate variables leads to an apparent lack of explanatory power of the atomistic approach. Courgeau suggests how the use of contextual and multilevel analysis can help solve the problem.

2. The FFS data

The FFS gave rise to a collection of broadly comparable datasets for 24 countries that were collected over a long, twelve-year period. As Festy and Prioux (2002) argue, the FFS model questionnaire was an instrument that greatly contributed to fair comparability (see also Chapter 8). It was inevitable, however, that the national questionnaires varied. There were countries that conducted their surveys before the model questionnaire was ready – these were the countries that helped pioneer the project and were participants from its inception – and they used their own questionnaires. The countries that carried out their surveys after the model questionnaire became available, especially those with long experience with similar surveys, could not refrain from adapting the model to national needs and preferences, to ensure a measure of continuity with past surveys. The third group of countries, which had conducted their FFS-type surveys outside the context of the project and whose data were later incorporated into it, could not but also use their own questionnaires.

The survey design recommended by the FFS envisaged interviews with unrelated women and men in their childbearing years. The decision on the number of women and men to be interviewed was left to the discretion of the countries. The outcome was that the number of female and male interviewees varied from country to country. The number of female interviewees was everywhere larger than the number of male interviewees. The length of the childbearing span was also left to the discretion of the countries. As a result, the persons interviewed were sampled from different age or birth cohorts; for details see Festy and Prioux (2002) and Chapter 8. Moreover, the suggested survey design was silent on the inclusion of non-natives and the institutionalised population. This also brought about variations from country to country, contributing to a diversity of survey designs adopted.

Sampling design and procedures were discussed but no detailed common guidelines on these issues were prepared for use by the countries. As a result, even countries that conducted their surveys within the framework of the FFS project had no guidelines. They could not but go their own way. As long as the samples were representative, conclude Festy and Prioux (Chapter 8), the variations should not have had adverse effects on data and their cross-country comparability.

Two other aspects of sampling procedures appear to have been more problematic. Firstly, different countries responded differently to the inevitable situation whereby the target number of interviewees could not be reached due to refusal or unavailability of respondents or because of inability to contact a household or the fact that the household did not have any member eligible to be interviewed. The majority of countries responded by resorting to one form of substitution or another, a procedure which by no means can guarantee that the resultant sample would be representative of the population from which it is drawn. Secondly, response rates appear to have varied enormously – due to limited documentation, Festy and Prioux could estimate comparable response rates for only some countries – and reasons might have been different in different countries.

What lessons are to be drawn? Experience with the FFS suggests that if international data comparability is accepted as a key prerequisite for FFS successors, these would have to meet the following critically important conditions:

- Firstly, survey instruments, including the questionnaires and survey and sampling designs will have to be developed and agreed upon before surveys are fielded. This will require a longer lead-time than in the case of the FFS.
- Secondly, national interests notwithstanding, a minimum but stringent set of conditions will need to be stipulated and observed by countries wishing to participate in the project. This will increase comparability but limit the number of participating countries.
- Thirdly, in order to increase international data comparability, the surveys will have to be fielded over a time period considerably shorter than the FFS's 12 years.

3. FFS comparative research

Notwithstanding the limitations of the FFS, investments into the project yielded returns that are far greater than the ones that had accrued to the FFS predecessors. This success is due to the resolve of the FFS Informal Working Group (IWG) to ensure that the FFS data would not become a data graveyard. Lars Østby succinctly echoed this resolve at one of the IWG meetings: speaking about the need to have as many researchers involved in analysing the FFS data, he put the point across by quoting Mao, "Let one thousand flowers bloom". The FFS Advisory Group on Comparative Research sought to ensure that as many flowers as possible would bloom. It not only helped with making it known as widely as possible that the SRFs were available for any *bona fide* researcher to use. It also, in its capacity as the Organising Committee of the FFS Flagship Conference, helped attract a good sample of contributions to the Conference, many of which are included in this and the companion volume.

However, the FFS and its Advisory Group did not accomplish one last, lofty task. As Patrick Festy argued at the Conference, they did not conceive or promote a comprehensive, co-ordinated comparative research project that could have been carried out by a tightly-knit group of researchers, which could have made further use of the FFS data and brought the project to a logical conclusion by publishing a collection of volumes with more or less definitive FFS findings. In a similar vein, Cliquet (Chapter 3) lamented that, just as FFS research was gaining momentum, the FFS project was brought to a close. Van de Kaa (forthcoming) is concerned that perhaps inevitably

researchers will move on to 'greener pastures' as he calls them, leaving the FFS data not fully exploited.

What, if any, lessons can be drawn from this? We will restrict ourselves to a single one, probably the most important one. The funding of the FFS, in particular of the co-ordinating activities carried out by the PAU, was tenuous from start to end. Given the task at hand over the twelve-year period, it was probably more precarious than that of many central and eastern European countries who took part in the project. It is not surprising that the funding for the co-ordinator ended after a twelve-year period, thus not making it possible to heed the wishes of those who rightfully felt that the project should have been extended and brought to a logical conclusion. That it ended in 1999 and not earlier is due to the understanding of the United Nations Population Fund (UNFPA), an organisation that does not routinely support long-term projects like the FFS. It is no use to lamenting the fact that the UNFPA did not extend its support for yet another four-year period.

Europe-centred FFS successors must look for and find a solution to what for the FFS was truly its Achilles' heel. And the solution will have to be found in Europe, in spite of its jumble of national and international organisations that have competing visions, mandates and interests. Sufficient and steady funds are not just needed to ensure co-ordination and promotion of a joint enterprise; they are essential for developing common instruments and guidelines. As we have seen earlier, without these international comparability of data and findings cannot but suffer. More importantly, without them, compromises of all sorts are far more likely to be made and the chances of failure are far greater. Money is not the solution for every problem; however, at the end of the day, as Coleman (Chapter 10) says, "the most fundamental equation in demography remains zero money = zero research".

F. FROM FFS TO GGP

In 2000, the PAU, with the financial backing of the UNFPA, launched a new, ambitious international comparative project called the Generations and Gender Programme (GGP). Many of the FFS lessons identified above crystallised as the work on the new project gained momentum and contributed to its development. Key aspects of the programme – its objective, main design features, principal data sources etc. – have been summarised in Macura (2002), parts of which are reproduced in Chapter 1 of Volume II. Therefore, here we will only briefly outline certain aspects.

The GGP is grounded in the need for continued research into reproductive and partnership behaviour, in particular research aimed at explaining behaviour, not just describing it. It is also built on the assumption that fundamental changes have occurred over the past few decades between members of different generations and genders within the family. It is also hypothesised that those changes have been influenced by fertility and partnership behaviour, as well as the changes in the intergenerational and gender relationships having influenced behaviour. These changes and interactions have been occurring in the context of broader family transformations caused by fewer offspring, longer years of life and the growing fragility of unions, among other things. They have also happened in a changing society, with shifts in the economy, legislation, institutions, public policies, norms and mores. So far policies have responded differently within Europe: variations exist, for example, in the policies targeted at the elderly (health care and pension schemes). Too little is known about the real impact of these policies on older adults. Are the declining numbers of children and siblings weakening intergenerational support and are they changing the relationships of the elderly with other family members?

The goal of the project is a cross-national, comparative, multidisciplinary, prospective study of the dynamics of family relationships in contemporary industrialised countries. The GGP builds on the FFS's focus on reproductive and partnership behaviour as key processes of family building and change. But it goes further to encompass two key family relationships, specifically those between children and parents and between partners. It opens up new opportunities for the study of these two family relationships. Moreover, it is hoped, it will allow for research into the interactions between behaviour and changes in these relationships. As the GGP will not restrict itself to people in their childbearing years – persons aged between 18 and 79 will be studied – it will also enable analysis of partnership behaviour, change in relationships and their interactions among persons passed their childbearing years.

At the core of the 'GGP universe' is the individual; however, not one stripped of his or her proximate and remote environments. The GGP recognises three levels of influences – the micro, meso and macro levels. The meso level consists of the individual's household and his or her social support network, including non-co-residing family and friends. The macro level comprises the individual's community and nation. As a result, the GGP provides an opening for attempts at explaining behaviour as it occurs in a two-tiered context by means of multilevel analysis. Thus, the programme will attempt to overcome the limitations of the atomistic approach.

It will also seek to greatly broaden the range of 'background' variables used to explain fertility and partnership behaviour. These will include education and work, but also many others. The GGP is built on the hypothesis that intergenerational and gender relationships have an important explanatory power. As a result, some of the variables will depict those relationships – among them are satisfaction with child-parent and partner-partner relationships; monetary and in-kind inter- and intra-generational transfers; gender division of household tasks and roles and the like. The variables will also include earnings, welfare receipts and housing conditions as well as general and behaviour-specific values and attitudes. The approach to the choice of variables is deliberately eclectic so that alternative, sometimes competing attempts at explaining behaviour can be tested.

The key data source will be a prospective longitudinal survey, which will provide data at the micro and meso levels. The Generations and Gender Survey (GGS) is envisaged to go through several waves spaced three years apart and interview in each country about 10,000 individuals, half of them women, half men. It will yield data on many of the variables that were beyond the reach of the FFS; these will be time-varying variables that hold the promise of explaining behaviour and changes in family relationships. Another key source will include a variety of sub-national and national-level aggregate data capable of capturing a variety of economic, social, institutional and legal conditions believed to impact behaviour and relationships. Along with prospective longitudinal data, the GGS will collect retrospective event-history data for several key biographies.

In addition to developing the GGS questionnaire, the GGP will offer a number of other programme instruments. These will include, among others, a GGS survey design, guidelines on alternative sampling designs and preferred sampling practices and, at a later point in time, a Standard Recode File design and a co-ordinated research and publication scheme. The programme will also develop a macro-level contextual database. The GGS data and the contextual database should put the multilevel analyses proposed by Courgeau within our reach. Whether the GGP will succeed depends to a large part on whether the programme gets off on a firm financial footing.

G. CONCLUDING REMARKS

These two volumes give an overview of the current state of play of research into family-

related demographic behaviour based on the FFS data. However, researchers working in this field are not content with the progress they have been making toward understanding fertility and partnership behaviour, particularly the former. Hence, research challenges remain and, most likely, efforts in the field will accelerate. The quest for answers as to how and why people make fundamental life choices such as whether or not to form a union, have a child, break up the family and so on will continue. Such choices will influence our demographic future – and not just how many children we will have, but more importantly, the size of societies we will be living in, the balance between workers and those who need to be supported, and the cultural mix of our countries as we increasingly rely on foreign labour for our prosperity. The answers will be sorely needed if or when we try to influence our demographic future rather than just try to adapt to it. The more we understand the processes involved, the better prepared we and our leaders can be for the task ahead.

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ENDNOTES

[i] The professional affiliations of the authors indicated through the volume are those that were valid at the time of the FFS Flagship Conferences. The list of the contributors to the volume is in Annex 2.

[ii] Explaining the environment in which those changes took place, Van de Kaa (1993, p. 114) wrote as follows: "The demographic effects of the interrelated changes in structure, culture and technology tend to point in the same direction. For market economies, they are compatible with the demographic trends observed. The higher living standard and greatly increased economic independence and security of individuals, the shift in values towards greater individualism and post-materialism, and the 'second contraceptive revolution' are identified as having a profound impact on the aspirations, life course and life style of the populations concerned. They have reduced the role and influence of secondary groups, have changed the institutional context and mental model of the family and couple and make individuals seek self-fulfilment and pursue higher order needs."

CHAPTER 2

IS LOW FERTILITY POST-MODERN AND BEYOND THE ACTION OF GOVERNMENTS?

Dirk van de Kaa[*]

The creation of the Euro zone and the subsequent decline of the Euro against the dollar have had the pertinent effect of revealing some of Europe's structural economic weaknesses. Two issues of Time magazine spelt these out without mercy. The issue of 29 May 2000 dealt with 'Europe's pension crisis' and argued that the fiscal health of European countries is "...threatened by a demographic time bomb...". The 8 May 2000 issue discussed the problems of Europe's labour force which was described as being "out of date...and out of work". We may shrug off such pronouncements as rather transparent attempts to weaken the Euro still further. And indeed the Viewpoint section in the latter issue discusses the future of the Euro under the telling title 'Warning: Thin Ice'. But that is too easy. For one, that particular Viewpoint was written by the director of economic research of a Paris-based bank, and secondly any European demographer will admit that the demographic differences between the Euro and Dollar zones which underlie part of the arguments – Europe's very low birth rate being one of these – are genuine.

Discussions at this meeting, the first FFS Flagship Conference I have attended, will focus on partnership and fertility. We will, no doubt, learn a great deal about recent developments and the needs for further research, and we will, perhaps, hear pleas for action to stem the tide. I should like to begin the discussion by posing an outrageous question, viz.: Do fertility regimes of human populations have some sort of half-life, just as we observe in the decay of radioactive particles? It is implausible, of course, but that question occurred to me when I looked at the long-term demographic processes observable in Europe since the beginning of serious population studies. It is very striking that, for most of their history, the populations of Europe used at most half of their biological capacity to reproduce. While women would, on average, have given birth to 14 or 15 children if they had used their reproductive capacity to the full, the average family size in pre-industrial Europe did not usually exceed 7. The demographic transition, which began in France and Hungary in the second quarter of the eighteen century, brought that figure down to three or four. Since the mid-1960s a further halving appears to have occurred. A standard European population now has a total fertility rate – an expected average family size, one might say – of about 1.5 children. Without much exaggeration, we may conclude that currently European populations seldom use more, and frequently a great deal less, than 10 per cent of their capacity to reproduce themselves.

It is well known that this pattern, if sustained for a sufficiently long period, will inevitably lead to a rapid ageing of the population and a marked decline in population numbers. As Time magazine noted, such prospects give rise to various speculations and concerns. It also poses difficult research questions. The most important of these appear to be: Why is fertility so low? How long will it remain so low? Have we now reached rock bottom or

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could another halving occur? And, finally, what are the courses of action open to governments? Do research results indicate what action governments could take? I should like to reflect briefly on all of these questions.

First, then, the question whether a further halving of the fertility level could occur. Funnily enough, Italian demographer Antonio Golini has argued convincingly that the lowest level of fertility likely to be reached in any large national population for any length of time, would, in fact, imply precisely that further halving. If 20 to 30 per cent of all women were to remain childless and the remainder stopped after having had one child, the resulting total fertility rate would be half the current level, that is, it would result in about 0.75 children per woman. Statistical records to date support the idea of the existence of such a low floor or threshold. Golini feels that the innate desire to be a parent, to have a family, to play the role of mother and father, will prevent fertility from falling below that threshold. After all, so he reminds us, children and only children, can satisfy that desire. Golini also suggests that if fertility were to drop lower than that base threshold, reactions in society would probably be so strong that a recovery of fertility would result. He does not enlighten us as to the precise mechanisms that would create that miracle, but at this stage of play I will not hold that against him.

If we do not have a clue as to why fertility in Western countries has fallen to well below replacement level, discussing the probability of a further decline quickly turns into an effort to cycle on air. So let me, secondly, reflect on why current fertility is so low. It is a truism to say that it is a manifestation of profound societal changes. But what, precisely, are those changes? Are they mainly economic in nature? Are they cultural? Or is it a consequence of changed contraceptive technology? Any attempt to answer questions of this type involves crossing the borders of disciplines. We have to leave demography and look at what economists, sociologists and political scientists have to say about developments in our societies since the mid-1960s. I regret having to admit that, as yet, I am not sufficiently well versed in the relevant literature to speak with great authority on it. But, since professors are paid to have at least an opinion (ideally a unique opinion), then let me give you my assessment of the situation.

The various researchers I have consulted see economic and technological changes as giving rise to the development of the modern welfare state. A post-industrial service economy featuring flexible specialisations, continuous restructuring, and concentration without centralisation, based on the extensive use of communication and information technology, becomes the norm. Social and cultural changes result in increased individualism and loss of traditions: social classes dissolve; primary groups (the family) lose part of their significance. To sum it up in one sentence: simple modernisation gives way to reflexive modernisation. Different researchers come to different conclusions as to the precise consequences of these changes and the most appropriate ways of dealing with them. But what the analyses appear to have in common is that they stress the changed nature of risks in present day society. German sociologist Ullrich Beck stresses the dominance of side-effects over the original intentions of government measures; it is no longer the lack of knowledge which creates risks – risks follow from increased knowledge. The ability to keep societal developments under central control is greatly diminished. The boundaries between science and politics, between public and private, and between what is part and not part of politics become blurred. Knowledge leads to an attitude of reflection, of self-analysis, of self-confrontation. Anthony Giddens, Director of the London School of Economics and a respected advisor to the present UK Government, similarly points out that in our modern day societies risks are mainly self-manufactured, they are internal in nature and result from choices made. He likewise sees a decline in the ability of societies to keep control of future developments, and highlights the enormous increase in options and choices that citizens face. Equipping individuals better for that complicated task and ensuring their inclusion in the development process are perceived as crucial tasks of modern governments. From this

perspective the welfare state should be remodelled to become a social investment state.

American sociologist, Ronald Inglehart, has followed a much more empirical approach. On the basis of a series of value surveys conducted in a large number of countries, he has observed a shift from materialistic to post-materialistic values. He has seen concerns about economic and physical security being replaced increasingly by concerns about quality of life and opportunities for individual self-expression. Now that the risks of becoming destitute, without income, food and shelter have effectively been nullified, there is room for increasing concerns about what people want out of life. In his most recent book, Inglehart characterises that shift as one from modernisation to post-modernisation. In his view the process of economic development leads through these two successive trajectories. In consequence, these imply transformations in the basic norms governing politics, work, religion, family and sexual behaviour.

Independent of whether researchers use the terms post-modern, late modern or reflexive modern, they stress the fact that the great stories, the meta-narratives of societal progress – of the role of the sovereign nation state, and of the inherent value of observing certain behavioural standards – appear to have lost their appeal. Our societies have become newly unordered; individuals do their own thing and set their own priorities. The risks people face have shifted. From a demographic perspective it implies that they have become free to choose whether to have a child and when, whether within or outside marriage, and whether to marry, to cohabit or to remain single.

If this is, as I believe, the background of the new demographic behaviour documented since the mid-1960s, we may draw important conclusions regarding its degree of permanence. In my view the present constellation of trends is unlikely to be a mere temporary aberration. Examining the root causes also allows us to draw a series of conclusions regarding the possible courses of action open to governments wishing to reverse or modify those trends. This is because the broad societal changes described also affect the political process and the system of governance. Dutch political scientist, Herman van Gunsteren, has pointed out that they have rendered the traditional political and administrative operating system obsolete. The time has passed when administrators and politicians could use an advantage in knowledge and power to find a compromise between the most desirable and most practical course of action, and subsequently enforce their solution. Our newly unordered societies are extremely difficult to govern; they play tricks on well meaning administrators. The latter see their initiatives fail, frequently with considerable transaction costs. People appear to have lost faith in their own representative governments; the gap between elected officials and the population at large has widened. Attempts to bridge that gap through referenda, hearings and the like, have not been very successful. A better way forward, so Van Gunsteren stipulates, is to move from the traditional operating system, based on Analysis and Instruction, to a system based on Diversity and Selection. That is to say, instead of coming up with a ‘one fits all’ solution, based on a traditional analysis of problems and options, governments will have to leave room for diversity, while selecting which developments should be supported and which should be discouraged. It is easy to see that making choices presupposes having a clear set of values. Governments will have to learn again how to make timely choices and, and in so doing, how to fulfil their proper political function.

As far as I can judge, Van Gunsteren’s assessment is well rooted in current thinking among political scientists of repute, even though they may differ in their remedy. I refer to it because of its implications for demographic research and population policies. As I see it, demographic research such as that undertaken by the FFS project will become increasingly important and policy relevant. It will show participating countries the behavioural diversity encountered in their population and, if the

results are comparable and become available in a timely fashion, it will give them a picture of the most recent trends. If the country maintains a demographic institute, with well-trained analysts, it will be able to give valuable information on the position of the country in relation to others and on the complexity of the issues involved. That will help governments in making the necessary choices with the least possible delay. Conceivably such organisations could also provide assistance in the selection process itself by analysing the likely repercussions of choices made. If, however, they are no longer involved in data gathering and analysis, such institutes soon lose that ability and their edge in knowledge. Consequently, they are bound to lose their usefulness for politicians and policy makers alike.

Ministers who receive policy advice suggesting a simple measure to stimulate people to marry early or to have more children, should sack that advisor or close the institute it comes from. By the same token, any politician or policy-maker thinking that there is a single best solution to the present day population problems of European countries deserves our deepest sympathy. Intervention in the population field may become increasingly necessary. Trying to influence fertility trends may become as inevitable as attempting to steer international migration flows. Yet the only way forward I can see is to develop suitable instruments through trial and error. Demographers who want to modify human reproductive behaviour would do well to follow closely what goes on in other disciplines.

And so, what will the future unfold? A return to bigger families or a progression to even smaller families? It will be exciting to see. I just wish I had longer left to see it happen.

CHAPTER 3

ORIGIN AND HISTORY OF THE FFS PROJECT: ACHIEVEMENTS AND LIMITATIONS

Robert Cliquet[*]

A. ORIGIN AND HISTORY

1. UNECE Regional Meeting on Population and Development 1987

The first event which gave the impetus and political underpinning to a Europe-wide fertility and family project was the Regional Meeting on Population and Development of the United Nations Economic Commission for Europe (UNECE), which was held in Budapest 24-27 February 1987 (Economic Commission for Europe, 1987).

During this intergovernmental meeting, a number of scientific advisors to the national delegations promoted the desirability and feasibility of a new round of fertility and family surveys in the UNECE region. This would be a follow-up to the European Comparative Fertility Surveys of the late 1960s and early 1970s, and the World Fertility Survey of the late 1970s. As with these previous surveys, it was planned that it would be co-ordinated by the Population Activities Unit (PAU) from Geneva. The meeting emphasised the need for policy-oriented research in the fields of fertility and family. In its recommendations, it identified the study of the determinants of family formation, family planning and fertility as the main foci of attention. It endorsed a new round of comparative fertility surveys to address these issues in an innovative manner (Economic Commission for Europe, 1987).

These recommendations were integrated into the programme of the PAU, which then co-ordinated the new round of fertility and family surveys (FFS). However, the UNECE did not provide all the necessary financial resources to implement this programme: instead it was largely financed by the UNFPA.

2. CBGS Ad Hoc Working Group 1987

The second stimulus came from the CBGS in Belgium. Within the framework of its overall research programme on current and possible future trends in family development, their causes and implications, the Flemish Population and Family Study Centre was preparing for a new, more comprehensive fertility and family survey to be implemented in the early 1990s. Although this fifth NEGO[i] was to provide data for inter-survey comparisons, it was not planned to be a mere repetition of the former ones. The research team wanted to test the hypotheses underlying various new theoretical approaches emerging in the scientific community. Several national population institutes in Europe also had similar plans.

In view of this, the CBGS took the initiative to bring together a group of experts from several European countries. The Ad Hoc Working Group met 7-8 December 1987. In addition to members of the CBGS research team on partnership and reproductive behaviour, the meeting was attended by several experts[ii]. It was a brainstorming session about aims, methods and inter-centre co-operation on fertility and family surveys currently in the pipeline.

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The participants presented their current or planned work on large-scale fertility and family surveys. They discussed the new survey orientations on the basis of their past survey experiences and new theoretical developments. They also identified priorities for common issues to be addressed.

This Ad Hoc Working Group, *inter alia*, made the following recommendations (CBGS, 1987):

- To focus the new surveys on the recording of life event histories of individuals' partnership, reproductive and educational-occupational careers, not only in order to analyse them on their own, but also to study their interrelationships;
- To include questions on fertility attitudes as well as on intentions and expectations with respect to future fertility timing and intensity, in the hope of producing a basis for more refined population projections;
- To collect relevant data on sexual intercourse, contraceptive behaviour, abortion and subfecundity, in order to evaluate the stated fertility intentions and to assess future fertility behaviour;
- To test new hypotheses, particularly with respect to individuation processes, and to include, in this respect, a number of questions on religious beliefs and practices, materialism/postmaterialism and risk concerns in relation to partnership, parenthood and employment;
- To include classical background variables on the geographical, demographic, occupational and ideological origin and status of the respondent and his/her partner;
- To foresee the needs of inter-survey, and if possible, international comparative analyses;
- To include both men and women in autonomous samples, regardless of their marital status, and to cover a wide band of age groups;
- To include, wherever possible, immigrants and their descendants;
- To adopt the WFS formula of a general core questionnaire and a limited number of optional modules on specific issues.

Looking back at the report of the 1987 Ad Hoc Working Group, it appears that all its core recommendations were incorporated into the FFS.

3. Outline of the FFS Framework

In 1988, the PAU commissioned the CBGS to produce a draft framework paper and a draft questionnaire. The late Joseph van den Boomen, then head of the PAU, played a major role in this preparatory FFS phase.

The PAU also set up an Informal Working Group on 'The Promotion of Fertility and Family Surveys in the UNECE Region'. The IWG included representatives from all institutes that were planning to organise national surveys. This included more than 50 persons by the end of the project. The IWG met for the first time in December 1988 and discussed in detail the draft framework paper (Economic Commission for Europe, 1988). The following year, the final version of the FFS framework paper was published by the UNECE (Population and Family Study Centre, 1989).

The main focus of the theoretical framework for the FFS was, obviously, the new wave of demographic changes – particularly in the fields of partnership and reproductive behaviour – that had occurred in many European countries since the mid-1960s. These were commonly resulting in significant trends towards fertility levels below replacement level, which would lead to an ageing population and the possibility of population decline. It was clear that these changes would require adaptive and responsive policies in many domains of social life. At the UNECE Regional Meeting on Population and Development in Budapest, it was the concerns expressed in this respect by the experts and policy makers that were in fact the rationale for the recommendation to launch a new round of fertility and family surveys.

It is a matter of dispute in scientific quarters whether there is a theoretical underpinning to fertility and family surveys. Some consider that large-scale fertility surveys are solely descriptive and thus of a non-theoretical nature. The viewpoint taken by the IWG was that the study of partnership and reproductive behaviour and their current changes in modern society requires several different scientific approaches and sources of information, some of which can only be obtained through large-scale representative surveys. In their turn, such surveys may serve both theoretical and policy-oriented purposes. The FFS design, consequently, was constructed in modules, assembling and even accommodating several different theoretical approaches for the issues to be included in the survey.

The ultimate goal of the new round of surveys was a better understanding of current trends and the future course of reproductive behaviour. However, recent developments in the field of partnership behaviour and family structures required that fertility be studied in the broader context of the life course. The increasing complexity and heterogeneity of partnership biographies, involving a greater variety of formal and informal living arrangements between as well as within individual life cycles needed to be taken into account. This led to the decision to broaden the new round of surveys in the areas of the partnership and reproductive biographies – hence 'FFS' instead of 'WFS.' However, it must be acknowledged that the two former waves of internationally comparable fertility surveys included many biographical elements in the field of partnership behaviour. Moreover, intimate partnerships, living arrangements and formal family structures deserve to be studied in their own right, for scientific, educational as well as policy reasons.

The major aims of the FFS were defined as follows:

1) the simultaneous acquisition of interrelated family and fertility data, complementary to census and vital registration data, to be used for multiple purposes of a scientific, educational, administrative and political nature. This part of the questionnaire would mainly concentrate on the recording of life event histories of partnerships, reproduction, education, occupation and other salient events, allowing for causal analysis of their sequential interrelationships and interactions;

2) the acquisition of various data to be used for the elaboration of more refined demographic projections. People now have the opportunity, with modern family planning methods, to plan when to have children and how many children to have. It was, consequently, hypothesised that better predictions may be possible about future reproductive behaviour, at the individual as well as at aggregate levels. Therefore, it was considered vital to collect information on such issues as partnership behaviour, subfecundity, contraceptive practice, attitudes towards induced abortion, intended or expected timing and number of children, career aspirations and even value orientations;

3) testing specific new hypotheses concerning possible determinants of partnership and reproductive behaviour. First, these would include the traditional proximate determinants of reproductive behaviour – fecundity, sexual intercourse, contraceptive practice and induced abortion. Secondly, interrelationships with educational-occupational biographies could be analysed. Thirdly, it was hoped that the new FFS would allow for the analysis of the effects of newly emerging cultural values and attitudes such as secularism, individualism, post-materialism and risk sensibility on lifestyle options, life course flexibility, career aspirations and leisure preferences;

4) testing potential reactions to specific policy questions relating to fertility and family. These could be determined either by proposing hypothetical questions or by direct questioning on the acceptability of particular policies. From respondents' answers, insights might be gained on the relationships between reproductive intentions and behaviour, on the one hand, and specific family-related policy options, on the other hand. Also it was hoped that

the Population Policy Acceptance survey (Moors and Palomba, 1995) might be linked to the FFS;

5) undertaking inter-survey and inter-country comparisons of the evolving partnership and reproductive behaviour in the UNECE region. The value of large cross-sectional surveys increases whenever they are repeated at regular intervals, with at least some identical sections. This not only allows within- and between-cohort comparisons, but also permits the validity of recorded data at different moments of time to be crosschecked. Inter-country comparisons of changing partnership and reproductive patterns, imbedded in different socio-economic, socio-cultural and political contexts are, obviously, of great interest, both for analysing converging trends, as well as for understanding persisting variations.

In addition to defining the aims of the new survey round, the FFS leadership team also formulated recommendations with respect to the sample design, the outline of the questionnaire and how to conduct the fieldwork.

4. FFS Questionnaire

During 1989-1990, the first drafts of the FFS questionnaire were discussed and amended by the PAU Informal Working Group and later by other experts in 1990-1991. The current PAU chief, Miroslav Macura convened these meetings.

The outcome of this process was a minimum core questionnaire plus optional modules on migration history, contraceptive history, values and beliefs, and population policy acceptance. The final proposal was finalised by the PAU, the staff of which, meanwhile, had been expanded with an FFS Project Manager, Erik Klijzing.

The Institute for Resource Development (Columbia, Maryland, USA), under the supervision of Martin Vaessen, field-tested the core questionnaire as well as some of the modules. On the basis of their recommendations, the PAU performed a final revision of the questionnaire.

Fred Deven from the CBGS prepared the optional module on values and beliefs. Rossella Palomba from the IRP in Rome and Hein Moors from the NIDI in The Hague developed the module on attitudes to population policies (Population Activities Unit, 1992).

In essence the FFS core questionnaire includes three biographies (partnerships, reproduction and education-occupation), plus questions on family origin and on values and attitudes. The core questionnaire comprises 10 sections:

- Household characteristics
- Parental home
- Partnerships
- Children
- Other pregnancies
- Fertility regulation
- Views on having children
- Other views
- Education and occupation
- Partner characteristics.

Together, the core and optional modules include most of the issues that were originally proposed to be investigated. Some of the original ideas, however, were omitted, e.g. data on inter-generational social mobility, data on parenthood competing with leisure activities, and Schmid's hypothesis on risk sensibility (Schmid, 1984). Some gaps were probably due to the absence of adequate research instruments; others were probably considered of lower priority.

B. ACHIEVEMENTS

1. International co-operation

First, it should be stressed that despite its limited resources, the FFS project is an excellent example of successful international scientific co-operation. The FFS co-ordinating body, the PAU, should be congratulated on the successful outcome and the UNFPA thanked for its financial support.

It does not often happen that 24 countries decide to co-operate in a scientific venture, pooling their manpower and resources for a common scientific goal of relevance to society and policy-makers[iii]. Moreover, research institutes in several countries – Belgium, Italy, Netherlands, Norway, Poland, Switzerland and the USA – spontaneously volunteered to contribute to the development of the project. Researchers from these, plus other countries, were involved in the painstaking work of the steering groups such as the PAU Informal Working Group (IWG) and the PAU Advisory Group for the FFS Programme of Comparative Research (AG).

2. Common research goals and instruments

A crucial achievement of the FFS project was the definition of common research aims and the adoption of a common methodology. The fact that the participating countries largely accepted to work with the same core questionnaire, plus in some cases the optional modules, and that they covered essentially identical population samples with respect to age, marital status and gender, is extremely important for one of the ultimate goals of the project: inter-country comparisons.

3. Surveys in 24 countries

Participants in the FFS included 24 UNECE countries, covering all major areas in Europe, plus the overseas Anglo-Saxon countries – Canada, the USA and New Zealand (Population Activities Unit, 1992-2000). This substantial participation resulted in the creation of a large and comprehensive database covering a total sample of more than 100 000 women and just under 50 000 men. It allows for in-depth cross-cultural and inter-regional comparative studies. In addition, the database as a whole also enables the transnational analysis of specific life events or particular population sub-groups that may have only a small representation in each of the national samples.

Because of its dimension and participation, the FFS is one of very few truly international comparative social science research projects.

4. The FFS Standard Recode Files (SRF)

One of the key achievements of the PAU is the setting up in Geneva of the FFS standardised database for comparative analysis. This database contains the Standard Recode Files (SRFs) of the large majority of participating countries (Population Activities Unit, 1993). Following standard scientific procedures, the Advisory Group of the FFS grants permission to individual scholars to use the FFS data. The PAU guarantees the anonymity of all respondents, which is a crucial pre-requisite for the guardians of national data.

A praiseworthy aspect regarding dissemination is that the standardised database is made available to researchers free of charge. The PAU did not resort to the practice of some European institutions, which sell data to the research community at exorbitant prices – data that were gathered with public funding. This easy accessibility to the data in the Standard Recode Files should facilitate the production of an impressive number of reports by scholars from a variety of institutions and a broad range of countries.

5. FFS Standard Country Reports (SCRs)

Another key achievement of the FFS project is the production of a series of FFS Standard Country Reports (SCRs). The original common outline of these was devised by Gijs Beets of the Netherlands Interdisciplinary Demographic Institute (NIDI) and Lars Østby of Statistics Norway.

At the time of writing, most country reports have already been published. More are in press or preparation and it is hoped that, in the end, all participating countries will have produced this useful basic document.

The FFS Standard Country Reports are not only interesting case studies on family development, they also allow basic inter-country comparisons on many aspects of partnership and reproductive behaviour, with data which are not available elsewhere. The SCRs also include summarised biographical data as defined by the FFS (United Nations Economic Commission for Europe and United Nations Population Fund, 1996-2000).

6. National studies

On the basis of information which the participating countries have forwarded to the FFS co-ordinator, it appears that already an impressive number of diverse national studies have been carried out. Extensive studies have already been completed in Finland, Italy, Germany, Norway, Poland and Sweden. It is to be hoped that these will be published in the scientific journals and so made available to the international research community.

In addition to these general studies, specific research topics are also being investigated by various countries. One of the main topics of interest is the relationship between family formation and participation in the labour force. A few studies are focusing on the effect of education. Naturally, the two main subjects of the survey – partnership and reproductive behaviour and their interrelationships – are being intensively studied. In the field of partnerships, the transition into adulthood, cohabitation and family dissolution are often the subject of specific studies. As far as fertility is concerned, separate analyses are being done on desired fertility, the timing of first births and on the prevalence of third births. Family planning contraception – sterilisation and abortion – is being studied in several countries. Other recurrent topics on reproductive behaviour are infertility and subfecundity, and the reproductive health of adolescents. In a few countries attention is also being paid to the reproductive behaviour of certain minorities. Several studies deal with gender differentials and in a few countries there are some specific studies on men or fatherhood. A few investigations deal with the effect of values on behaviour. Methodological studies, in particular on event history approaches, are reported from Germany, Italy and Poland. In several countries, analyses are being made at the inter-regional level. Last, but not least, a number of policy related studies on family and population have also been undertaken.

This preliminary and probably incomplete overview shows that all the major components of the FFS data are being exploited. Some topics, e.g. family formation, family life and labour force participation, family planning, transition into adulthood, timing of first births and arrival of the third child, are well covered. Other relevant issues have so far been analysed in only a few countries, e.g. the interrelationships between partnership and reproductive behaviour, infertility and subfecundity, the impact of values, future fertility and policy implications. From the available information, it is not obvious whether the biographies are being fully exploited in event history analyses. On the whole, however, the present results already seem promising.

7. FFS comparative projects

One of the important goals of the FFS project was to stimulate and organise international comparative studies using the FFS Standard Recode File database. It was, however, accepted that the SRF database could also be used for national research purposes.

The PAU Advisory Group on comparative research has already approved access to the database for an impressive list of over 80 projects (Population Activities Unit, 2001). It appears that most of these research projects aim at international comparative studies. The research topics largely correspond to the types of studies being undertaken at a national basis. Many researchers clearly want to broaden their scope of interest to include international comparisons.

Comparative projects which use the basic data sets of the FFS include the following topics:

- Partnerships, living arrangements, partnership disruption
- Family formation
- Fertility biographies
- Fertility regulation (contraception, abortion)
- Methodological analyses.

Many comparative projects also study the interrelationships between some of the major FFS themes:

- Partnership and fertility
- Employment and family building
- Values and attitudes influencing partnership or reproductive behaviour
- Socio-economic determinants of family building
- Gender differences in life course events and sequences of life course events.

A notable gap in the current list of comparative projects is the absence of international research teams. However, there are praiseworthy exceptions to this: the international team studying transition into adulthood (Corijn and Klijzing, 2001); the Austrian-German-Swiss project on attitudes towards family policy (Dorbritz and Fux, 1997); the Dutch-Flemish comparative study on family building (De Beer and Deven, 2000); the study of matrimonial and procreational attitudes and behaviour in Hungary and Poland (Kamaras and Kowalska); and the Austrian-German-French-Swedish-US team on step-family fertility.

C. LIMITATIONS

An international comparative project such as the FFS has – despite, or even because of, its ambitious goals – some limitations.

1. The comprehensive study of partnership and reproductive behaviour

As already stated, it is not possible to comprehensively study such complex phenomena as partnership and reproductive behaviour solely by means of large-scale sample surveys. The FFS, consequently, is limited in its research possibilities and its data needs to be complemented by and possibly integrated with other types of research. These may include qualitative surveys, in-depth surveys on specific topics or family types, contextual analyses, Delphi surveys, etc.

2. National and institutional constraints

It may be self-evident, but large-scale research projects such as the FFS are often hampered in achieving their goals by unexpected events in the various collaborating institutions. These can include: the drying up of financial resources; decreased interest by some research team members; changing research priorities of the institutional, administrative or political authorities, etc. Such events may prevent some or all of the originally planned goals being completed.

3. International constraints

The same obviously applies to the achievement of international goals. Personnel movements, budgetary constraints and policy changes often handicap the realisation of the original goals.

The FFS project is an interesting case in this respect. The project has reached maturity, with the full set of Standard Recode Files being made available, and an impressive list of comparative research projects is underway. However, the project is being brought to an end just when the final and most important results are yet to appear. There is no doubt that the lack of ongoing financial support for the co-ordinator is the reason for this premature completion of the FFS project.

Although the time has come to prepare and launch a new round of family and fertility surveys, it is disappointing that the FFS cannot be prolonged in parallel with the new activities. This is necessary in order to fully exploit the internationally comparative data, to follow up the comparative projects and to synthesise and

assess the results of the comparative components of the project. These all take time after the basic national surveys have been finalised and the comparative database has been established.

Despite the number and diversity of the comparative projects tackled so far, there are still some important issues that are under-researched and deserve further attention, even though some of them were probably not explicitly aimed at in the initial planning. In particularly, these include:

- Advanced analyses of the biographies and their interrelationships;
- The development of more refined projections;
- The influence of values and beliefs on partnership and reproductive behaviour;
- Policy implications of the project's conclusions;
- Gender comparisons of the FFS biographies.

D. FUTURE

Although one might fear to be pleading in vain and for a lost cause, the need must be reiterated for extending the comparative study phase of the present FFS. From both a scientific and policy point of view, it is unacceptable that such a project stops just at the stage when the most important results are still to come. Policy makers should be aware that advanced scientific research, especially in an international comparative context, requires time. They should not content themselves with preliminary or elementary results.

Clearly, the existing SRF database in Geneva should be kept available for the research community and for subsequent comparison with future FFS surveys.

As the PAU/IWG rightly argued in its resolution of 20/3/96 (Population Activities Unit, 1996), a second FFS round of surveys should be conducted in the first decade of the new century. Changing family and reproductive behaviour should be further documented and understood. Ongoing trends and changes should be monitored. The gaps in other databanks such as census and vital registration data should be filled. Above all, our knowledge should be further improved and extended in order to provide a solid basis for the development of wise public policies and programmes.

A new FFS round should obviously be based on the experience of the present project, which has demonstrated the advantages of a well co-ordinated effort. However, the project should be organized so that international comparative analyses are foreseen from the beginning and appropriate resources allocated to that part of the project.

Concerning the contents of the new round, it needs to further evolve with the times. It should include, in addition to the comparative information of the present FFS, data on newly emerging issues and problems, in particular with regards to new social vulnerabilities and new vulnerable groups.

Perhaps the most important change would be to follow the example of the Estonian FFS and survey a much broader age group, involving not only adults in their reproductive phase of life, but also teenagers (or even children), middle-aged people and the elderly. This recommendation has, in recent years, emerged from several population institutes in Europe. An example of such a project is that of the CBGS entitled 'Families in transition – an integrated survey on the life course of Flemish families.' This project intends to survey children, adults and older persons and integrate the content, methodology and organisation of the surveys across the generations (CBGS, 1997; 1999). Another example is the Netherlands kinship panel study (NKPS) and a related study entitled 'Family relationships: ties that bind' of the NIDI (2000a and 2000b) and other Dutch university research institutes. These projects are aiming to describing the nature and strength of solidarity in family and kin relationships, explaining variations in solidarity between individuals and social

categories, and examining the consequences of solidarity on individual well-being.

A similar idea forms the basis of the recently established 'Network for Integrated European Population Studies (NIEPS)', which brings together eleven national population institutes in Europe (NIEPS, 2000). The European Commission, under the 5th Framework Programme 'Improving the socio-economic knowledge base', is funding this project.

The three themes of the NIEPS work are:

- Gender relations, family-building and patterns of work;
- Ageing, intergenerational solidarity and age-specific vulnerabilities;
- Demographic and cultural specificity and the integration of immigrants.

Two dimensions are covered when examining these themes and their interdependence:

- Retrospective: reviewing the recent research undertaken by the network members and pertinent results obtained by other institutions;
- Prospective: laying the groundwork for future comparable policy-relevant research at the European level.

In the period 2000-2002 NIEPS is holding six thematic workshops and three technical meetings. The latter will bring together groups of experts to produce recommendations for the research frameworks and instruments for the prospective research. In this way NIEPS could contribute to paving the way for a new comparative European FFS-type survey, thus guaranteeing continuity of the policy-oriented research on partnership and reproductive behaviour.

Finally, the PAU has launched a new project entitled 'Generations and Gender: research into their behaviour and quality of life.' This is partly aimed at maintaining continuity with the FFS. The PAU convened a meeting on 3-5 July 2000 in Geneva, which was attended by representatives of the national population research institutes, selected university research institutes and national statistical offices of the UNECE. The results and recommendations of this meeting have been published (United Nations Economic Commission for Europe and United Nations Population Fund, 2000)[iv].

The 'Generations and Gender Programme' aims at promoting research into the behaviour and social and economic conditions of individuals, both male and female, across different generations. It hopes to shed new light on the degree to which ideals are being fulfilled in the fields of intergenerational solidarity and gender equality. It intends to further monitor demographic developments over time and wants to maintain a high degree of continuity with the FFS. A new round of comparable household/family sample surveys in the UNECE region will be one tool by which the PAU hopes to achieve these goals.

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ENDNOTES

[i] NEGO stands for Nationale Enquête Gezinsontwikkeling (National Survey on Family Development).

[ii] The experts included Dragana Avramov (Demographic Research Centre, Belgrade), Jenny Gierveld and Hein Moors (Netherlands Interdisciplinary Demographic Institute, The Hague), Ferenz Kamaras (Population Section, Central Statistical Office, Budapest), Ron Lesthaeghe (Centre for Sociology, VUB, Brussels), Lars Østby (Statistics Norway, Oslo), Rossella Palomba (Institute for Population Research, Rome), and Joseph Schmid (Lehrstuhl für Bevölkerungswissenschaft, Bamberg).

[iii] United Nations Economic Commission for Europe, Population Activities Unit, Palais des Nations, 1211 Geneva, Switzerland, http://www.unece.org/ead/pau/ffs/

[iv] United Nations Economic Commission for Europe, Population Activities Unit, Palais des Nations, 1211 Geneva, Switzerland, http://www.unece.org/ead/pau/ggp/

CHAPTER 4

EASTERN AND WESTERN EUROPE'S FERTILITY AND PARTNERSHIP PATTERNS: SELECTED DEVELOPMENTS FROM 1987 TO 1999

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… there can be no serious doubt that in the late 1980s and early 1990s an era in world history ended and a new one began.
(Hobsbawm, 1994, p.5)

A. INTRODUCTION

The winds of change set loose by the historic events at the turn of the 1990s brought about a profound transformation of the demographic landscape of Europe. Eastern European fertility and partnership behaviour has been in the forefront of the transformation, contributing to new patterns of Europe's east-west differences. In this chapter we will compare changes in fertility and partnership patterns over the last decade across the continent, stressing east-west variations. This broad-brush picture will be complemented by an analysis of certain aspects of behaviour associated with the patterns. This will result in a collage of topics, some of which are frequently discussed in the literature, while others are not.

We will begin with a broad view of fertility and first marriage trends. We will then briefly consider the evolution of cohabitation and extra-marital childbearing. These sections will largely draw on vital statistics. Next we will examine some of the choices that young women have been making with respect to cohabitation and marriage as well as living arrangements and having children. Recent contraceptive and induced-abortion practices will also be examined. These sections will mainly use FFS data. Finally, the major forces behind the recent sharp drop in fertility in eastern Europe – by far the most dramatic of the changes considered here – will be analysed.

To enable fair comparisons to be made, the period under consideration will be the last full decade for which the relevant information is available, i.e. 1987-1997. One advantage of focusing on this period is that it straddles the onset of the rapid fertility and partnership changes in eastern Europe. On occasion, where data permit, we take a glance at changes that have occurred during 1998-1999.

B. OVERVIEW OF BROAD EAST-WEST DIFFERENCES

Today, just ten years after what Hobsbawm called the end of the "short twentieth century", evidence shows that the fall of Eastern European socialism during 1989-1991, arriving unexpectedly and occurring mostly peacefully, ushered in a new beginning for Europe, in particular for eastern Europe. With the fall of socialism came down the barriers which had separated the two parts of the continent, and so began the building of free-market democracies on the ruins of the centrally-planned one-party states. And the hope arose that one day Europe will be one and whole again. In the meantime, eastern and

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western Europe have grown in some respects closer to each other, but in others more distant than before. (In this chapter the countries belonging to eastern and western Europe have been categorised into a number of groups: these are listed in the Annex.) The renaissance underway in eastern Europe could not, in only one decade, erase the legacies of the past, particularly those stemming from decades of central planning and, in the process, reduce east-west differences to which these had given rise. During the decade, while some of the differences have begun to shrink after initially growing wider, others have continued to increase. As a result, eastern and western Europe, reconciled after decades of divisions, have remained distinct, with some parts of eastern Europe lagging behind the western countries more than ever.

It is against this backdrop of rapid changes associated with the historic transformation, that we shall consider developments in fertility and partnership behaviour in Europe. The present overview of these developments will highlight east-west diversity and contrasts. Although this approach to presenting variations within Europe may at first sight appear anachronistic, it will prove to be not only useful, but also essential.

First, let us quickly compare the societies of the two parts of Europe during recent times. In eastern Europe, the abdication of the communist regimes went hand in hand with the introduction of multi-party elections, in some instances the first ever, which ushered in parliamentary democracy and civil society. In countries that had already had a pre-Second World War experience of democracy, the shift to the new political order was smooth; in others, the political scene was unsettled for a while, remaining so in a few until today. The transformation from central planning to the market economy, accompanied by numerous institutional and legislative reforms, proved easier for the former countries, much harder for the latter. Overall, the pace of the transformation to the new political and economic order varied enormously across the countries. In some instances the process was held back by international and civil wars, in others by mere resistance to change. Economic decline, contraction in social programmes and safety nets, and a general decline in living standards were initially the norm everywhere. However, these trends were relatively short-lived in some countries, particularly those on the western flank of the region, after which improvements began; elsewhere they persisted throughout the 1990s. Never a homogenous region, eastern Europe grew even more diverse, so much so that nowadays one may distinguish two or even three tiers of countries, spreading from the westernmost ones to those of the south and east. In brief, the 1990s have been a period of major discontinuities and a growing differentiation in this part of Europe.

In contrast, the societies in western Europe saw no reason for course corrections as they continued to enjoy decades-long economic prosperity, the major dividend of half a century of peace on the continent. Continued economic integration has helped the least economically developed of these societies to start to close the gulf separating them from the more affluent ones. The western welfare state, differing from country to country in form and scope, has been perceived in some as an obstacle to international competitiveness at a time of spreading globalisation. Nevertheless, it has remained largely intact in many countries, as it appears to be regarded by parties over much of the political spectrum as a *sine qua non* of social equity, solidarity, cohesion and stability. The living standards of west Europeans consequently have continued to climb to unprecedented heights, opening new opportunities for the pursuit of material well-being and self-gratification. This continued prosperity, happening simultaneously to the economic malaise in the east, further widened the lead of western Europe and exacerbated the east-west economic and social disparities inherited from the past.[i] Emboldened by previous successes of integration, particularly in the economic sphere, the

European Union pursued the twin goal of widening and deepening the Union. It is now poised to bring into membership its immediate neighbours to the east, a powerful signal to others in eastern Europe to increase their efforts at political and economic transformation as a precondition to membership. In brief, the 1990s have been a period of continuity and further integration in western Europe.

C. FERTILITY AND FIRST MARRIAGE: CONTINUITIES AND DISCONTINUITIES

It was sometime in the 1960s that large-scale changes in childbearing and in union formation and dissolution started happening in western Europe. They comprised, among other developments, the advent of cohabitation, the retreat of marriage, the postponement of entry into parenthood and the spread of voluntary childlessness. This occurred at the time when highly effective modern contraceptives began to be widely available, spreading quickly in some countries. Two decades later, Lesthaeghe and Van de Kaa (1986), impressed by the magnitude and novelty of these demographic changes, concluded that this revolution needed to be labelled. They called it the Second Demographic Transition.[ii] Irrespective of whether the term was well chosen, it has experienced growing currency since its introduction, emphasising the radical departure from the childbearing and marriage patterns typical of western Europe during the baby boom era.

By the time of publication of their paper, this great departure had been well under way in the Nordic countries for some time, as well as in the Atlantic and Central-Western countries. Elsewhere, in particular in the Mediterranean countries, it had still not taken root, although certain aspects, such as the postponement of entry into motherhood, were under way. In other words, these shifts in behaviour had not moved in step in different parts of western Europe: some countries emerged as leaders, others as half-hearted followers and yet others had been bent on pursuing their own brand of transition. In the latter countries, some of the defining characteristics of the process, such as increased childbearing within non-marital cohabitation, were missing. This resulted in what, more than ten years later, was branded “an almost bewildering variability, ... a harlequin’s mantle of experience” (Van de Kaa, 1997). This was followed by the statement that “premarital cohabitation as a distinctive trait of the Second Demographic Transition has so far stopped at the Alps” (Lesthaeghe and Moors, 2000).

Through the late 1980s, eastern Europe, except for the former Yugoslavia to a certain extent, was living in isolation. However, people were marrying and having children in ways that were rather similar to those of western Europe in the baby boom era. The “socialist family” was not essentially different from the “bourgeois family” until about the onset of the Second Demographic Transition. Two children became the preferred number for the majority of parents. Significant differences, however, included the following: marriage and parenthood started earlier in the east than in the west; divorce was relatively more frequent; and voluntary childlessness was uncommon. In a minority of eastern European countries, the use of modern contraceptives, including the pill, grew at a respectable pace, despite government misgivings, or even discouragement. Elsewhere, however, readily available induced abortion on demand became the main method of birth control. As is well known, Romania was an exception, where access to modern contraceptives and induced abortion was a criminal offence.

Significantly, in many countries the state was actively involved in helping couples, often encouraging them to form marriages and have children. However, the average family size in eastern Europe during the socialist period was smaller than that in western Europe during the baby boom era. By the beginning of the 1980s, the pronatalist efforts, pursued by some countries after downturns in aggregate fertility occurred, resulted in a large degree of uniformity in period fertility levels

across the region. There was, however, a lesser degree of uniformity in period first-marriage levels. Soon after that time, signs of divergence started to appear in some of the Central-Eastern countries, e.g. the former Czechoslovakia, Hungary, Poland and in parts of the former Yugoslavia, including Slovenia. Nevertheless, at the time when the Second Demographic Transition was first being described in the west, eastern Europe in general had ample room for shifts similar to those that had been under way for more than two decades in western Europe. These shifts, however, were by no means imminent.

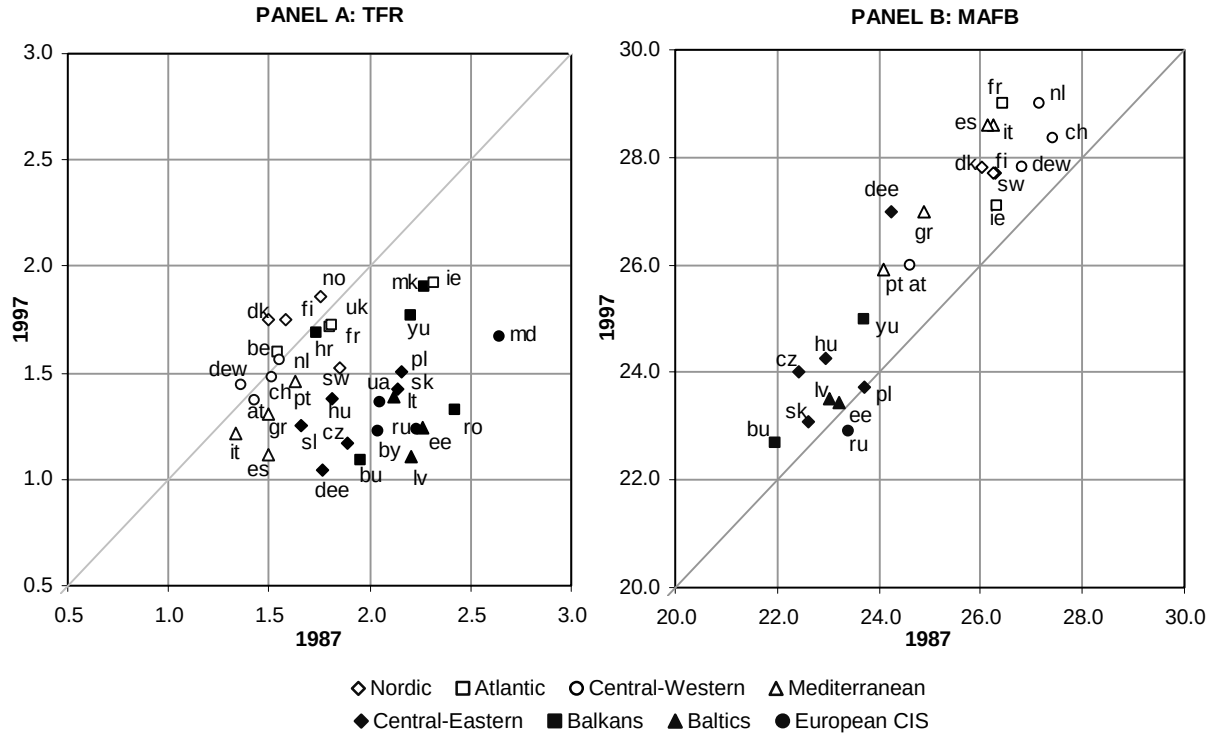
1. Fertility

The overriding impression one gets from examining basic fertility trends since the late 1980s is one of continuity in western Europe and discontinuity in eastern Europe.

In western Europe, the shifts in fertility, as measured by period total fertility rates (TFRs) amounted in many instances to a continuation of the trends that preceded them (Figure 4.1, Panel A). Even including the atypical Ireland and Sweden, fertility in much of this region remained stationary or continued to decline slightly. Only Denmark and Finland experienced a moderate recovery in the early 1990s before losing momentum again after the middle of the 1990s. Thus, in the face of the continued postponement of motherhood, to which we will presently turn, there were hardly any signs of fertility recovery up until 1999. A recovery, driven by fertility "catching-up" at higher childbearing ages – if it is to take place – still lies in the future. Norway maintained the next to the highest rate after Denmark and Finland, while Spain set a new record low. In the process, the differences across western Europe, particularly between the Nordic and Mediterranean countries grew wider.

In eastern Europe, there had been mostly moderate shifts in period fertility during the 1980s, some of which had been

Figure 4.1. Changes in total fertility rate (TFR) and female mean age at first birth (MAFB), 1987-97



Source: Council of Europe (1999).

upward, at least for a while, whereas others had been downward. The big changes occurred as of 1989. In many former socialist countries, the period TFRs took a sharp downward turn after that time. The former Yugoslav republics were an exception, where the previous moderate downward trends continued unabated as the country began to disintegrate.[iii]

The specific year when the steep fall began could easily be pinpointed for the Central-Eastern countries and Bulgaria, while it was less clear in the case of the European republics of the former Soviet Union and Romania. The Soviet Union had introduced a package of enhanced family policy measures during 1981-1983, while Romania had strengthened its coercive pronatalist measures around 1984. This sent period rates in both countries up before they began to descend again in the second half of the 1980s, thus making it difficult to determine the beginning of what subsequently became a sharp decline.

The break towards low fertility occurred in East Germany in 1990; in the Czech Republic, Hungry and Poland in 1992; and in Slovakia in 1994. In the European republics of the former Soviet Union, and in Bulgaria and Romania, it occurred earlier, mostly in 1989 or 1990 (United Nations, 1999). By 1997, the majority of the former socialist countries and republics were seeing the declines decelerating or coming to an end. These trends have essentially continued through to 1999, although there has been a small fertility recovery in a few of these countries.

The result has been Europe's new record lows – period TFRs that in a few, admittedly relatively small countries (Bulgaria and Latvia) were on par with that of Spain (1.12). The mean period TFR for eastern Europe (excluding Albania and Bosnia-Herzegovina) was 1.37 in 1997, a level that was one-third lower than that in 1988. The mean for western Europe in 1997 was 1.55, only slightly lower than that of ten years earlier. Eastern Europe suddenly became the leader in what over the past few decades had become a pan-European slide toward ever-lower fertility levels.

Clearly, the magnitude and the pace of the abrupt recent fertility decline in eastern Europe have shifted the centre of gravity of fertility change in Europe to the east. The burning question "How low can fertility get?" appears to apply now with even greater force to eastern Europe than to other parts of the continent. However, when we look beyond the east-west contrasts, the parallels between the Mediterranean and east European countries come into a sharp focus. The two groups of countries, considering just fertility levels, have so much in common. In 1997, the levels in the Russian Federation and Italy were almost identical, while the levels in Bulgaria and the Czech Republic were the same as in Spain. The data for 1999 do not modify this basic conclusion.

As a result of the recent eastern European fertility decline, a host of new questions have arisen, both for research and policy-making. For the former, in addition to the enduring question as to what has been behind the post-baby-boom fertility fall in western Europe, the main question now is what have been the main forces behind the east European decline. We will address that question toward the end of this chapter.

The postponement of entry into motherhood, underway for some time in western Europe, continued, causing the mean age of women at the time of first birth to rise everywhere. In a number of countries, this was by two years or more (Figure 4.1, Panel B). Significantly, the trend towards ever later age at first birth was strongest in the Mediterranean countries, with the mean age in Italy and Spain along with that in France catching up with that of the leader, the Netherlands: this is now approaching 30.[iv] Since 1997, in the majority of west European countries for which the data are available (Council of Europe, 2000), this trend now appears to be coming to an end.

The former socialist countries had been well known for their relatively youthful onset of motherhood and childbearing in general.[v] Along with the abrupt fertility drop as of 1989 occurred a departure from this pattern of early entry into motherhood. The rise in the mean age of women at the time of first birth has been, however, more limited than that observed in western Europe during the 1990s, except in East Germany and Slovenia. It was mostly confined to the Central-Eastern group and to Croatia and the present-day Yugoslavia. In these countries, as with the pattern of fertility decline, the rise in the age of entry into motherhood had already begun during the 1980s. Limited information on the Baltic countries and the European Commonwealth of Independent States (CIS) reveals that initially there was a drop in the mean age at first birth in the 1990s. This decline was then followed by an increase in age of entry into motherhood, a trend which then continued past the previous mean age. In Belarus and the Russian Federation the fall in age was followed by a regaining of the previous average age at birth of the first child.

Thus, with respect to the onset of motherhood, eastern Europe has grown more heterogeneous. Moreover, by 1997, the difference in average age of entry into motherhood between eastern Europe and western Europe was more than it was a decade earlier. This generalisation also applies to 1998-99, when the age of entry into motherhood continued to rise almost in all countries for which the data are available.

2. First marriage

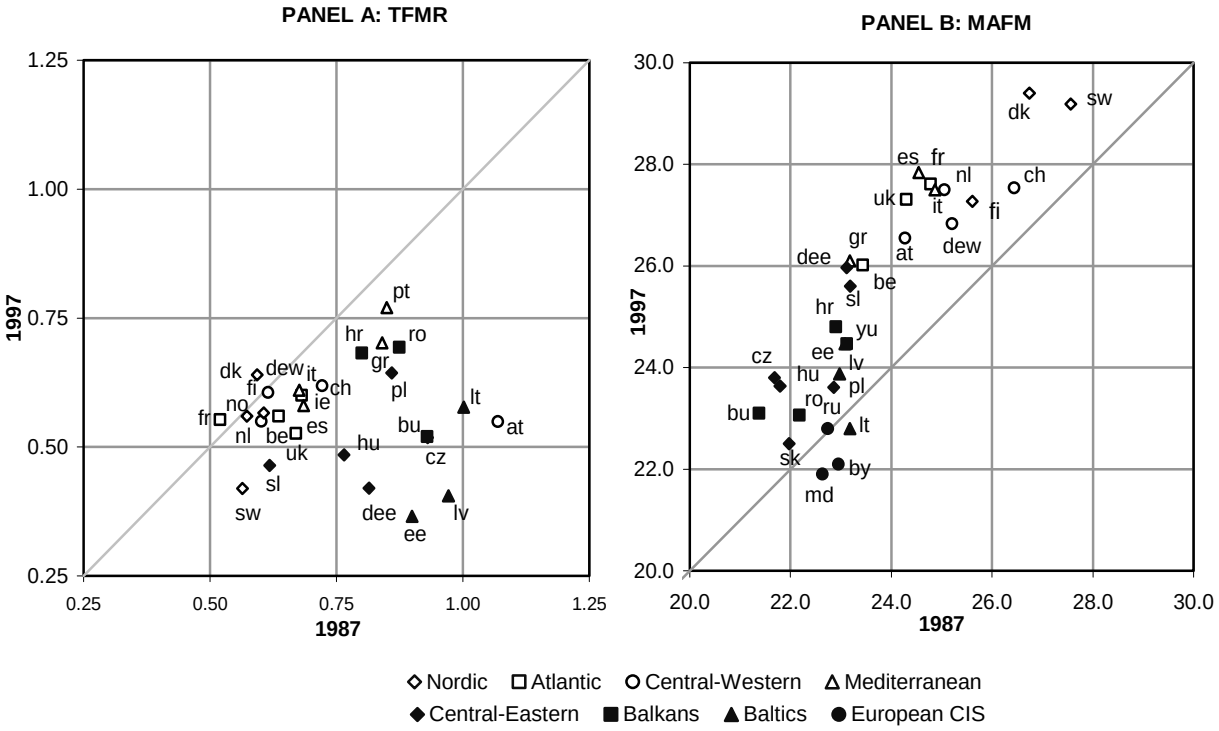
The pattern of first-marriage trends among women is very similar to that shown by fertility trends: continuity in western Europe, discontinuity in the eastern part of the continent.

In western Europe, a further moderate drop in the period total first marriage rate (TFMR) occurred in the majority of the countries (Figure 4.2, Panel A). In some countries, e.g. the United Kingdom, the fall was continuous. In other instances, a moderate tendency for the period TFMR to recover during the 1980s was followed by a further decline in the 1990s. This resulted in even lower rates by 1997 though they were not a great deal lower. Sweden's rate was the only one to drop below 0.5 in 1997. Significantly, in West Germany and the Nordic countries, for about two decades or longer, the period TFMRs have hovered around 0.6 or have shifted back and forth between 0.5 and 0.6. After 1997, half of these countries experienced a recovery of the rates, which may suggest that a reversal of the trend is now under way there.

It is known that drawing conclusions from period TFMRs of this order of magnitude regarding the ultimate proportions of women marrying are prone to understate these proportions. Life-table first marriage measures provide better indications as to the proportions ultimately marrying (Toulemon and de Guilbert-Lantoine, 1998). Nevertheless, the persistence of these low TFMRs, in spite of signs of recovery in half of the countries, does suggest that a sizeable proportion of women in these countries will never marry.

This further moderate retreat from marriage in western Europe has been accompanied by an additional robust postponement of entry into first marriage. The gains in the mean age at first marriage from 1987 to 1997, almost always a steady rise, ranged between two and three years in the majority of western European societies. Greece, Italy and Spain have experienced some of the largest gains (Figure 4.2, Panel B). This is a striking development, as it is precisely in these countries that premarital cohabitation, which has contributed to late marriage elsewhere, is relatively rare. Denmark and Sweden remained in the lead, with their means approaching 30, while Switzerland and West Germany saw some of the smallest increases. Since 1997, further gains have occurred in the countries for which information is available.

Figure 4.2. Changes in female total first marriage rate (TFMR) and female mean age at first marriage (MAFM), 1987-97



Source: Council of Europe (1999).

Incomplete evidence for eastern Europe, including the republics of the former federal states (the former Czechoslovakia, Soviet Union and Yugoslavia) suggests a picture of some diversity of first marriage patterns as early as the 1970s. The diversity increased over time, creating a degree of heterogeneity as the socialist era was drawing to a close. For example, parts of the former Yugoslavia, led by Slovenia, plus East Germany and Hungary already had relatively low period first-marriage rates at the time. Slovenia's rate, sliding down since the late 1970s fell below 0.6 in the late 1980s.

On top of this heterogeneity came the turbulence of the early 1990s, characterised by sudden upward jolts in the period TFMRs in a number of instances, followed by steep drops. It appears as if in these cases – for example, in Lithuania, the former Czechoslovakia and Romania – there was a temporary surge in optimism among young adults, which after the previous year or two of uncertainties made marriage seem a positive step.[vi] In these and other cases, precipitous drops occurred in 1991 or soon after. The story of what followed is fairly complex and cannot be quickly summarised. Another difficulty is that the data available, particularly that for the European CIS countries, are incomplete. The result of the highly diverse trends has been for the period TFMRs to fall below 0.5 in a number of countries along the Hajnal line.[vii] From Trieste towards St. Petersburg, these countries include Slovenia, Hungary, Latvia and Estonia; also in this group is East Germany.

The sudden and sharp retreat from entering into marriage in eastern Europe as portrayed by the shifts in TFMRs has generally been accompanied by a postponement of entry into first marriage. However, this has not happened throughout the region. The rise in the age at first marriage had been under way during the 1980s in parts of the former Yugoslavia, particularly Slovenia, and in East Germany and Hungary. This continued after the late

1980s, when other countries from the Central-Eastern group and the Balkans joined the trend. The trend became particularly strong once it had started among Czech women. However, in this case the upturn occurred only three to four years after the change of government.

The Baltic countries and the European CIS group behaved rather differently. When the former Soviet Union was heading towards dissolution and immediately thereafter, young people in the Baltics began marrying even earlier than before; the mean age at first marriage fell towards 22 years. This trend first started to reverse in Estonia, but the subsequent rise in that country's mean age appears to have almost stalled in the late 1990s, rising slowly toward 24.5 years in 1999. Latvia and Lithuania also saw a reversal of the trend; their mean age started climbing after reaching a minimum to achieve somewhat higher levels, though not much higher than those of the late 1980s. The same initial trend towards earlier marriage occurred in the European CIS countries, bringing the mean age down to 22 years and lower. The limited data suggest that the mean age in the Russian Federation increased in the late 1990s, but that in Belarus it remained stable at around age 22.

By 1997, Slovenia's mean age at first marriage was four years higher than that of the Russian Federation and Belarus, while Denmark's and Sweden's mean age was almost eight years higher. This illustrates how varied Europe's "harlequin's mantle of experience" has recently become. Since 1997, the data available for a small number of eastern European countries, all outside the European CIS group, indicated further increases in the mean age of entry into first marriage.

3. Quantum and tempo shifts

In sum, in western Europe, substantial across-the-board postponements of entry into both motherhood and marriage have been associated with more moderate changes, mostly declines, in the period total fertility and first-marriage rates (Figures 4.3 and 4.4). However, in eastern Europe, the changes in mean ages of entry into motherhood and marriage have fanned out, a few in the direction of slightly earlier entry, as seen in some Baltic and European CIS countries, but the majority towards later entry, especially in the Central-Eastern group. The declines in fertility and first-marriage rates, consistently larger than those in western Europe, appear to have been greatest where only limited shifts in the age at onset of motherhood and marriage have occurred.

This suggests that in western Europe, tempo effects of fertility and first-marriage changes, rather than quantum effects, have been dominant. In eastern Europe, in the Baltic and European CIS countries, however, quantum effects have, as a rule, been far stronger than tempo effects. Elsewhere, in the Central-Eastern and Balkan countries, a mix of quantum and tempo shifts has been seen.[viii] Due to data limitations, the results pertaining to first marriage in eastern Europe are less rigorous than elsewhere.

The use of mean age at first birth as a proxy for tempo shifts may be flawed, as there is no assurance that the mean ages of women at birth of children of different parities move in step. Therefore, in order to shed additional light on the contribution of quantum and tempo effects to fertility decline in eastern European countries, results were obtained by the Bongaarts-Feeny (1998) procedure for several of them (Table 4.1). They cover 1991-1995, the period of the most rapid fertility declines in the majority of these countries.[ix] The results lead to conclusions similar to those based on mean age at first birth as a proxy. The tempo effects are the strongest in the Central-Eastern group, in particular in the Czech Republic and Slovenia, while the quantum effects dominate in the European CIS countries. Estonia and Latvia lean toward the former group and Bulgaria and Lithuania towards the latter one.

Figure 4.3. Changes in total fertility rate (TFR) and mean age at first birth (MAFB), 1987-97

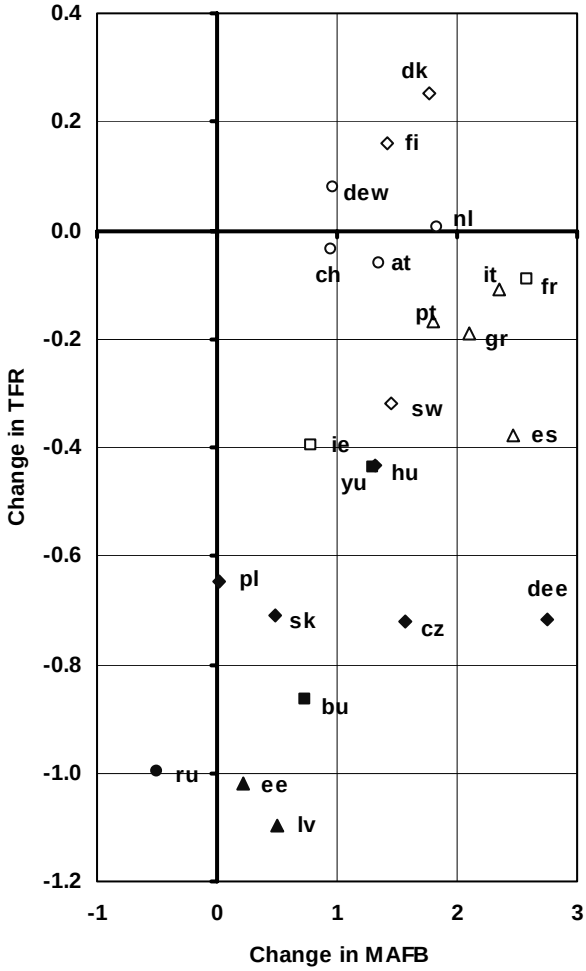
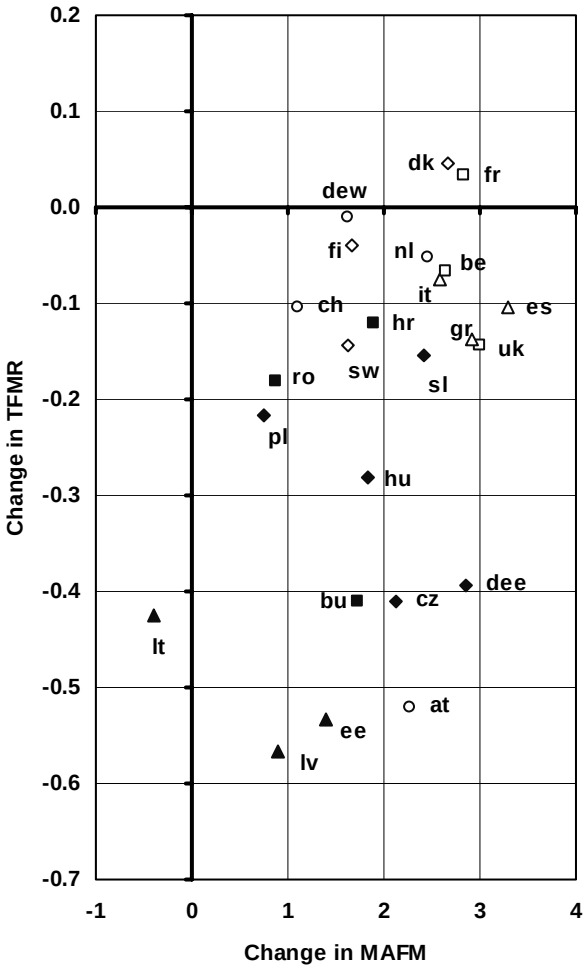


Figure 4.4. Changes in female total first marriage rate (TFMR) and female mean age at first marriage (MAFM), 1987-97.



◇Nordic □Atlantic ○Central-Western △Mediterranean
◆Central-Eastern ■Balkans ▲Baltics ●European CIS

Source: Council of Europe (1999).

This picture can be complemented by an analysis of patterns in the shifts in the age schedules of fertility and first-marriage for 1987-1997/98. The method chosen was that used by Lesthaeghe and Moors (2000) to study the changes in the fertility schedules for the industrialised countries since the middle of the 1960s.[x]

Throughout much of western Europe, the below-30 components of the total fertility and first-marriage rates have fallen, while those for 30+ have risen (Figures 4.5 and 4.6). In most countries the declines in below-30 rates have, in absolute terms, been greater than the increases in the 30+ rates. This suggests that in much of western Europe some recuperation of fertility and first marriage at higher ages has been taking place, but not at sufficient levels to offset postponements at lower ages. In a few west European countries, the drops below 30 in absolute terms have been smaller than the increase at 30+, resulting in a recovery of period total fertility and first-marriage rates.

Table 4.1. Results obtained by the Bongaart-Feeney model, selected east European countries, first half of the 1990s

Region/Country	*Period total fertility rates*			*Period*
	Reference year	*Observed*	*Adjusted* [1]	
Central-Eastern				
Czech Republic	1995	1.215	1.475	1991-1995
Hungary	1995	1.573	1.741	1991-1995
Poland	1995	1.611	1.706	1991-1995
Slovenia	1996	1.280	1.543	1992-1996
Balkans				
Bulgaria	1994	1.371	1.379	1990-1994
Baltics				
Estonia	1993	1.301	1.471	1993-1996
Latvia	1995	1.252	1.365	1991-1995
Lithuania	1995	1.491	1.444	1991-1995
European CIS				
Russian Federation	1995	1.331	1.309	1991-1995
Ukraine	1994	1.460	1.352	1990-1994

Note: [1] The adjusted TFRs were calculated using the data for the first and the last years of the periods indicated in the table.

Source: PAU Population Database.

In eastern Europe, where the picture is more mixed, all countries witnessed declines in the below-30 components. A majority also saw declines in 30+ fertility rates, while half the countries experienced drops in 30+ first-marriage rates.

D. COHABITATION AND EXTRA-MARITAL CHILDBEARING: A PERSISTING DIVERSITY

Declining fertility and the retreat from marriage in western Europe since the 1960s have been accompanied by a rise of non-marital cohabitation and extra-marital childbearing to varying degrees in different countries. By the late 1980s, the two processes had spread rapidly in the Nordic countries as well as in France and the United Kingdom. In most of the Central-Western countries, particularly Switzerland, there was a faster spread of cohabitation than extra-marital childbearing. In contrast, in the Mediterranean countries they had hardly begun taking root. The directions these developments have taken during the past decade is relatively poorly understood, the main reason being that the Fertility and Family Surveys are of limited help; in many instances they provide information that pertains only to the early years of this period. Nevertheless, if we attempt to stretch the value of these data by engaging in "informed speculation", as well as examining crude but readily available current data on non-marital childbearing, we can shed light on trends in the past decade.

The FFS data reveal enormous variations in the choice of cohabitation as opposed to marriage at entry into first union among west European young women in the late 1980s and the early 1990s. This is illustrated by the proportions of women born in 1965-1969 who opted for cohabitation rather than marriage by age 25 (Figure 4.7). Shown in the figure are also the proportions for earlier cohorts and thereby the shift away from marriage at entry into first union across cohorts and over time. If one were to hazard guesses for the cohorts born in the first half of the 1970s, the picture, certainly blurred, would show some nine out of ten young women choosing cohabitation as first union in the Nordic countries versus seven to nine out of ten such women opting for marriage in the Mediterranean countries. (Greece, however,

Figure 4.5. Changes in the components of total fertility rate at 30+ (A) and below 30 (B), 1988-97/98

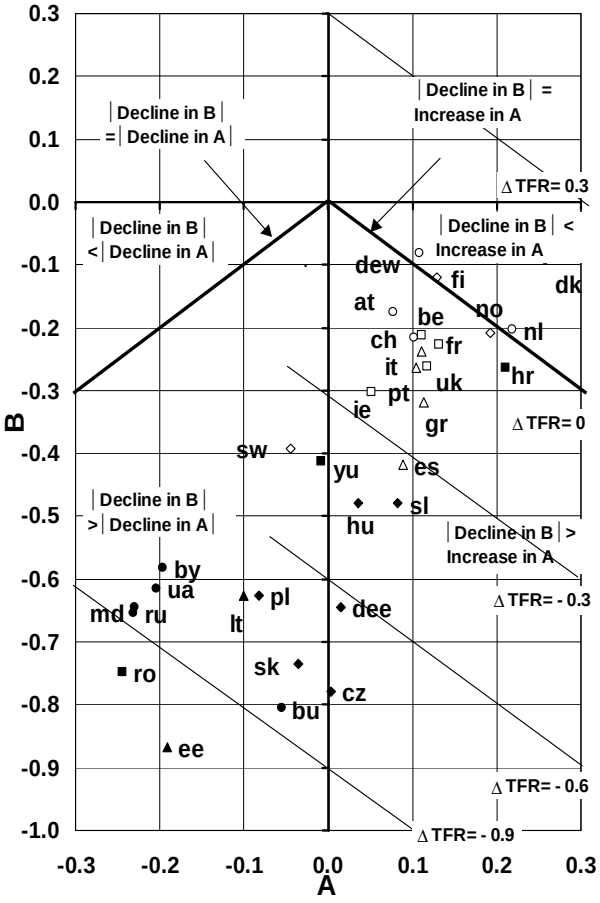
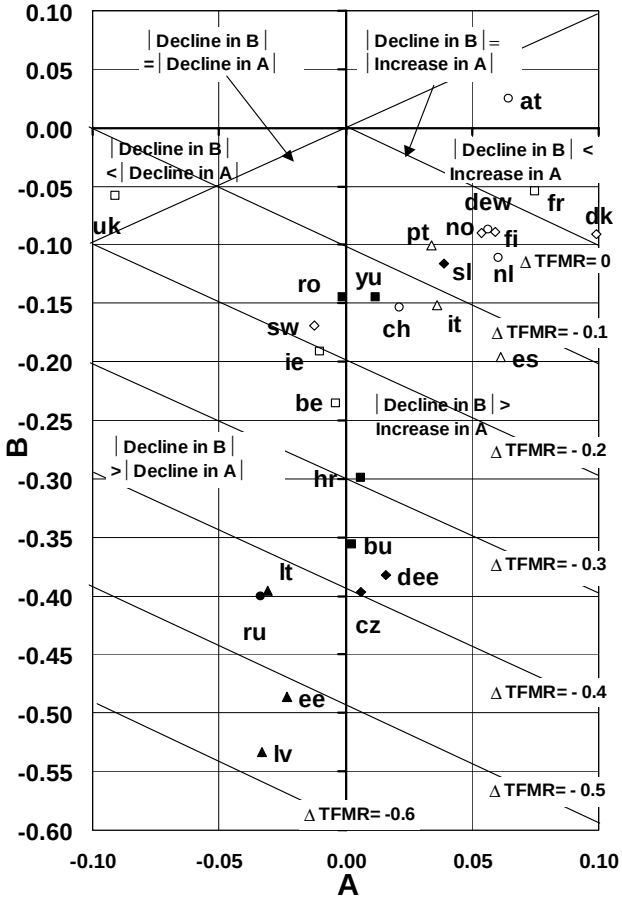


Figure 4.6. Changes in the components of female total first marriage rate at 30+ (A) and below 30 (B), 1988-97/98



◇ Nordic □ Atlantic ○ Central-Western △ Mediterranean
◆ Central-Eastern ■ Balkans ▲ Baltics ● European CIS

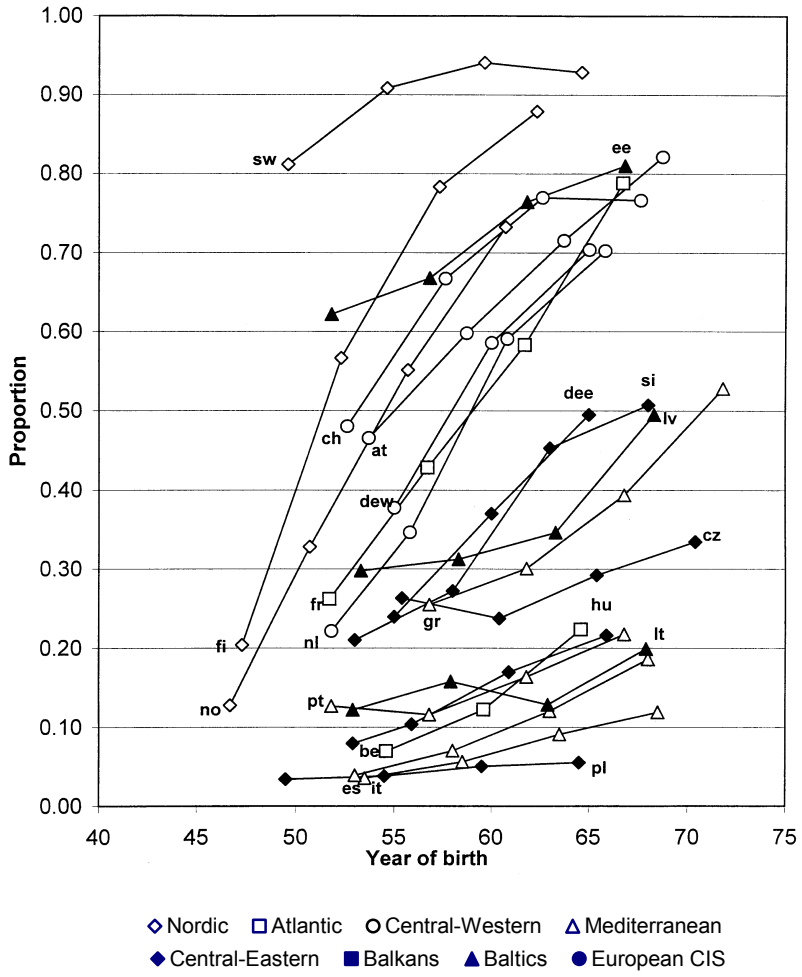
Source: Council of Europe (1999).

is a notable exception in the latter group.) Between these two ends of the spectrum are the other west European countries, the majority of which are closer to the Nordics, although Belgium (or to be more precise, Flanders) is closer to the lower end of the spectrum.

It is possible, but not certain, that in the last ten years this swing away from marriage has run its course in the Nordic countries, while in the Atlantic and Central-Western countries it has continued but at a slower pace, and in the Mediterranean group possibly accelerated. Even though the gap between the Nordic and the Mediterranean countries might have begun to narrow, the two parts of Europe are still a world apart. Only new data can indicate with certainty how cohabitation developed during the 1990s and how differentials, particularly the south-north divide, evolved.

The advance of extra-marital childbearing in some parts of western Europe since the middle of the 1960s – and the almost complete lack of it in others – reinforces the picture of a south-north divergence in this key distinctive trait of the Second Demographic Transition. As fertility fell during the post-baby boom period, extra-marital childbearing exploded in the Nordic countries, while remaining rare in the Mediterranean and most Central-Western countries (Figure 4.8). Since the late 1980s, however, extra-marital

Figure 4.7. Proportions of women choosing cohabitation rather than marriage as first union by age 25 in selected five-year birth cohorts by central year of birth



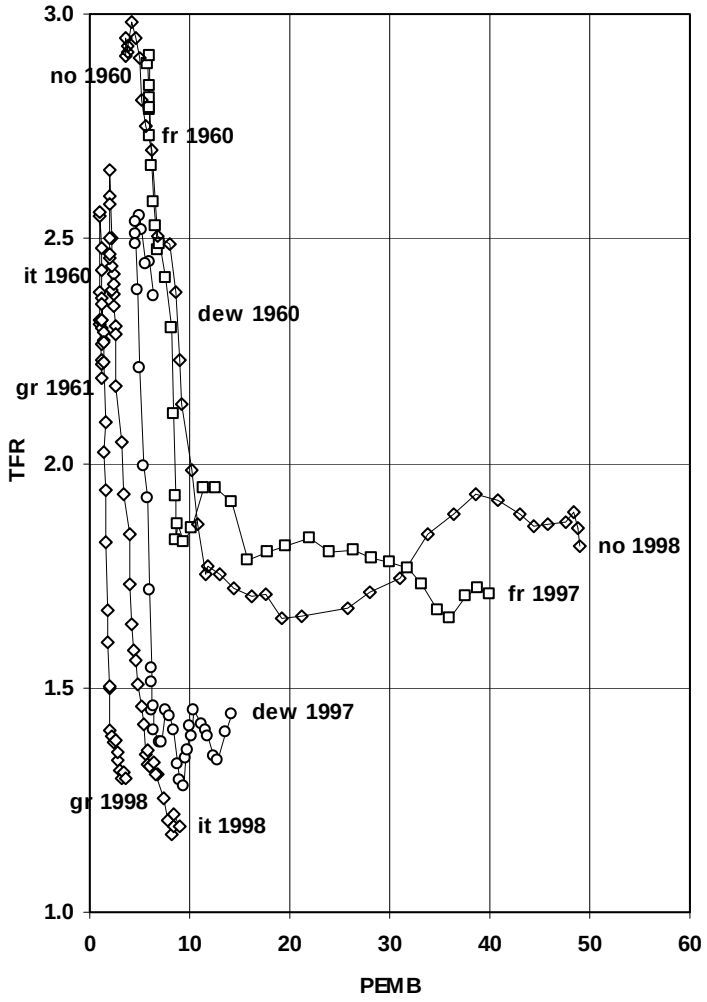
Notes: [a] Belgium stands for Flanders and Brussels.
[b] Estonia stands for "native" Estonians.

Source: FFS data.

childbearing has advanced throughout western Europe.

The increases in extra-marital births in the various groups of countries have been of different orders of magnitude, starting from equally different levels (Figure 4.9). As a rule, the gains have been the largest where the late-1980 levels were intermediate. This was the case for two Nordic countries (Finland and Norway) and all the Atlantic countries (no data were available for Belgium). The gains from far lower initial levels have been smaller in the Mediterranean and the Central-Western groups. Greece, Italy and Switzerland had not crossed the 10 per cent line by 1997, a level that can be taken as an upper limit of a low prevalence of extra-marital childbearing. In brief, the gap between the lowest and the highest levels on record had not begun to close; if anything it grew wider. While in the Nordic and some Atlantic countries out-of-wedlock childbearing remains widely accepted, in the Mediterranean and some Central-Western countries it is still generally shunned. As we shall see later, particularly

Figure 4.8. Shifts in total fertility rate (TFR) and proportion of extra-marital births (PEMB) for selected west European countries, 1960-1997/98

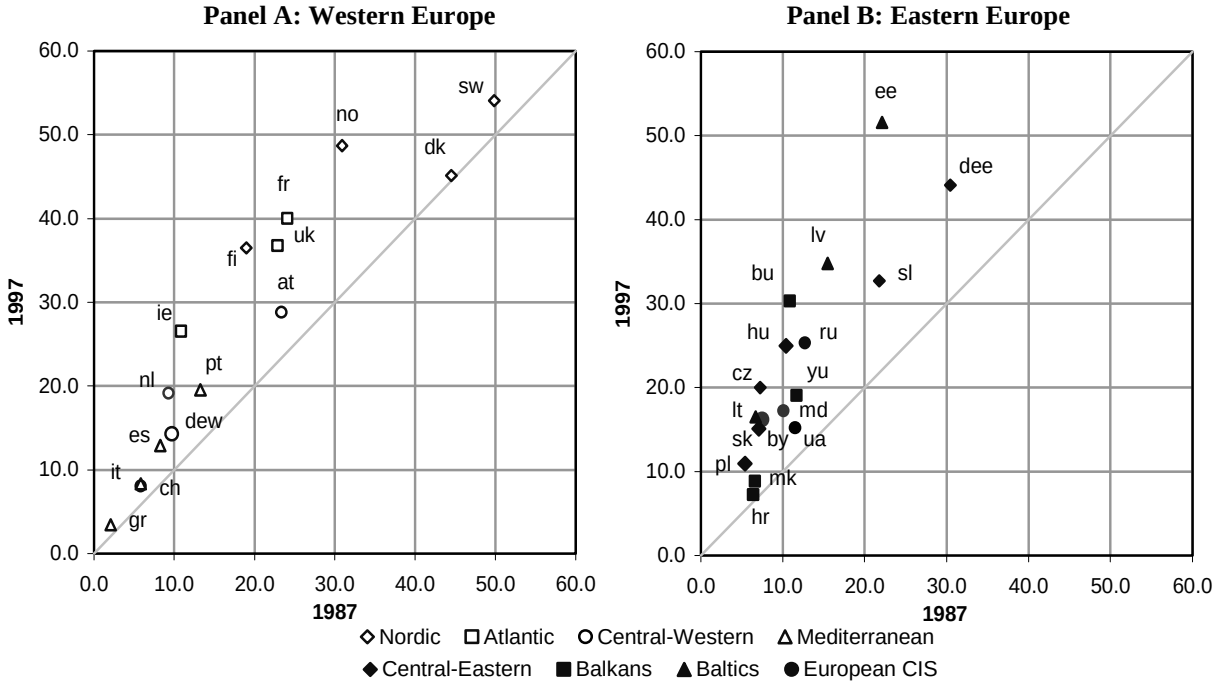


Source: Council of Europe (1999).

in Germany and Switzerland, cohabitation is acceptable, but not as a type of union in which to bear children.

The trends in cohabitation and extra-marital childbearing in eastern Europe during the socialist era had more in common with those in western Europe than was widely believed until a few years ago. As this era was coming to an end, some of the westernmost of the former socialist countries and republics experienced a growing substitution of marriage by cohabitation at entry into first union, and similarly saw a rise in the proportion of extra-marital births. The fact that these developments took place in the countries bordering the west suggests that an eastward diffusion of new forms of partnership and childbearing behaviour had started even before the fall of the east-west political divide. The borders, except those of the former Yugoslavia, might have been tightly controlled: however, in retrospect they appear to have been more porous than the authorities manning them believed. Other factors within those countries were probably at work, too. The examples are the policies in East Germany, which inadvertently encouraged extra-marital childbearing, and the likely leanings towards cohabitation and extra-marital childbearing in Latvia and particularly in Estonia that persisted during Soviet rule.

Figure 4.9. Proportion of extra-martial births, 1987-97
(in per cent)



Source: PAU Population Database and Council of Europe (1999).

The substitution of marriage by cohabitation as first union among the cohorts born in the second half of the 1960s have now approached the intermediate level in the majority of the Baltic and Central-Eastern countries. These countries – the Czech Republic, Hungary, Latvia, Lithuania and Slovenia, though not East Germany – all fall along the Hajnal line (Figure 4.7). Estonia has greatly surpassed this level, becoming almost indistinguishable from its Nordic neighbours. The Estonian data, however, pertain only to "native" Estonians rather than to the entire population of the country, including the sizeable Russian-speaking minority, which therefore distorts the picture. Poland was the only country that trailed the others.

As no FFS event-history data on cohabitation are available for the Balkans and the European CIS countries, we cannot tell how cohabitation might have displaced marriage there in recent times. Although many constraints on behaviour of individuals and couples that had existed during the socialist era disappeared during the 1990s, the conditions conducive to cohabitation deteriorated. These include such factors as the availability of housing and access to well-paid jobs among the young and their parents. It could have been these influences that have held the spread of cohabitation in check.

As the end of the 1980s approached, the majority of what later became known as "transition countries" had at least one out of ten children born to unwed mothers. However, it was only in East Germany, Estonia and Slovenia that the proportions of extra-marital births exceeded two out of ten. The next ten years saw a radical shift upward: about half of the countries approached or surpassed this level. Estonia and East Germany experienced a large surge, almost catching up with Sweden and Denmark. In absolute terms, the shift was particularly large in Bulgaria, where the proportion trebled, and in Latvia, while it was somewhat smaller in Hungary and the Czech Republic. Along with Romania and the Russian Federation,

these counties had between one-fifth and one-third of babies born to unwed mothers in the late 1990s.

E. CHOICES AND PRACTICES OF YOUNGER WOMEN: MORE BEWILDERING DIFFERENCES

We continue to look into the choices that young women have been making across Europe with respect to marriage and cohabitation, and will also consider their choices with regard to living arrangements and having children. Their recent contraception and induced-abortion practices will also be examined. Vital statistics are of limited value here and we will chiefly rely on FFS data. Unfortunately these are unavailable for several eastern European countries. We will analyse the information that is available, to determine cross-country and, in particular, east-west differences.

1. Choices about living and partnership arrangements and children

The choices of young women concerning living and partnership arrangements, as well as those concerning whether or not to have a child outside of marriage, vary enormously across western Europe. Let us consider some of these variations in detail.

The Nordic and Mediterranean countries are opposites; however, the Nordics are not a homogenous group (Table 4.2). Relatively few Nordic women aged 20-24 live with their parents, while a substantially larger minority – these proportions vary considerably across the three countries – live alone. The spread of the proportions cohabiting and living in marital unions across the three countries is even greater. Sweden's young women, unlike Finnish women, favour cohabitation to marriage. A significant and similar fraction – around 10 per cent – cohabit and have children, while the proportions of married women with children vary greatly across the three countries.

By age 25-29, hardly any Nordic women reside with their parents but considerably smaller proportions live alone. About the same proportions as at age 20-24 cohabit and have children, though in Sweden there are somewhat more of these women. The proportions of women who are married and have children are considerably larger, ranging between 35 per cent and 60 per cent.

In contrast, a large majority of Mediterranean women aged 20-24 live with their parents, while less than 2 per cent live alone; Greece is an exception to this with 14 per cent living alone. Between one and three in ten are married; these proportions are similar to those in Norway and Sweden. However, less than 5 per cent cohabit. The proportions of women who are married and have children are also quite low, while there are hardly any women who cohabit and have children. The proportion of women who are married or cohabiting and do not have children is also generally small.

At 25-29, the proportions residing with parents remain significant – in the region of 40 per cent – while living alone is somewhat more prevalent, yet still below 5 per cent; Greece again is somewhat higher with 8 per cent. Over half the women at this age are married. However, less than 6 per cent cohabit. Around 40 per cent of this age group are married with children. Only a tiny fraction cohabit and have children.

The Atlantic and Central-Western countries fall between the two ends of this wide spectrum. In certain respects, a number of them are similar to the Mediterranean countries. For example, in Belgium (that is, Flanders) very few women aged 20-24 live alone, which is similar to the Mediterranean countries. The proportion living in the parental home is lower than those in the Mediterranean countries but nevertheless high by European standards; a relatively larger share is married. Very few among these women cohabit and have children. The proportion married but having no children is the highest in Europe.

Table 4.2. Choices about living and partnership arrangements and children: proportions among women aged 20-24 and 25-29
(in per cent)

	Living				*With partner*				*With children*				*Without children*			
	With Parents		*Alone*		*Married*		*Cohabiting*		*Married*		*Cohabiting*		*Married*		*Cohabiting*	
Region/Country[1]	*20-24*	*25-29*	*20-24*	*25-29*	*20-24*	*25-29*	*20-24*	*25-29*	*20-24*	*25-29*	*20-24*	*25-29*	*20-24*	*25-29*	*20-24*	*25-29*
Western Europe																
Nordic																
Finland (1989/90)	4.3	3.0	17.5	8.2	48.5	69.5	24.7	14.5	37.1	61.6	8.0	7.4	11.4	7.9	16.7	7.1
Norway (1988/89)	16.1	2.2	18.1	12.3	24.8	55.6	33.3	21.8	15.5	47.2	11.6	11.7	9.3	8.4	21.7	10.1
Sweden (1992/93)	8.4	1.4	27.3	16.4	13.1	41.3	44.2	31.0	8.8	35.1	12.1	17.0	4.3	6.2	32.1	14.0
Atlantic																
Belgium (1991/92)	53.5	11.0	2.8	7.9	32.8	72.0	11.5	10.9	9.6	50.1	1.8	3.5	23.2	21.9	9.7	7.4
France (1994)	..[2]	..	16.6	15.6	14.7	46.5	23.9	23.3	8.6	33.8	5.4	10.4	6.1	12.7	18.5	12.9
Central-Western																
Austria (1995/96)	37.8	10.1	11.6	8.6	12.6	45.6	27.5	22.8	8.4	37.9	6.6	9.7	4.2	7.7	20.9	13.1
Germany (W) (1992)	61.8	25.0	18.5	10.0	6.7	37.2	8.4	14.3	3.8	26.0	0.9	2.2	2.9	11.2	7.5	12.1
Netherlands (1993)	44.0	7.0	15.0	0.0	16.0	49.0	21.0	24.0	6.0	29.0	1.0	3.0	10.0	20.0	20.0	21.0
Switzerland (1994/95)	36.3	5.3	16.6	4.9	15.2	53.5	25.0	20.3	7.2	35.4	0.7	1.3	8.0	18.1	24.3	19.0
Mediterranean																
Greece (1999)	54.4	24.3	13.5	7.8	17.9	59.4	4.9	5.8	13.6	45.2	0.0	0.2	4.3	14.2	4.9	5.6
Italy (1995/96)	86.8	44.8	1.1	2.8	11.0	50.1	0.9	2.7	6.8	34.7	0.2	0.6	4.2	15.4	0.7	2.1
Portugal (1997)	75.3	40.0	1.4	1.2	27.5	65.7	0.0	0.0	18.6	52.9	0.0	0.0	8.9	12.8	0.0	0.0
Spain (1994/95)	75.0	34.4	0.7	3.5	19.4	58.0	4.6	5.4	13.2	41.1	1.2	1.6	6.2	16.9	3.4	3.8

Table 4.2. (continued)

	Living				*With partner*				*With children*				*Without children*			
	With Parents		*Alone*		*Married*		*Cohabiting*		*Married*		*Cohabiting*		*Married*		*Cohabiting*	
Region/Country[1]	*20-24*	*25-29*	*20-24*	*25-29*	*20-24*	*25-29*	*20-24*	*25-29*	*20-24*	*25-29*	*20-24*	*25-29*	*20-24*	*25-29*	*20-24*	*25-29*
Eastern Europe																
Central-Eastern																
Czech Rep. (1997)	43.4	12.3	3.1	1.0	43.4	76.2	10.2	8.1	33.5	68.7	2.5	5.6	9.9	7.5	7.7	2.5
Germany (E) (1992)	43.4	14.4	21.5	3.6	13.7	54.0	17.0	15.4	8.5	45.7	6.1	9.2	5.2	8.3	10.9	6.2
Hungary (1992/93)	46.2	17.0	3.0	13.7	47.3	77.0	7.2	4.2	34.9	70.1	2.5	2.7	12.4	6.9	4.7	1.5
Poland (1991)	55.2	26.0	1.3	29.5	53.3	83.0	0.4	0.4	37.7	75.0	0.2	0.4	15.6	8.0	0.2	0.0
Slovenia (1994/95)	59.5	28.8	3.2	1.0	29.6	71.3	15.8	15.0	25.1	67.0	9.0	11.1	4.5	4.3	6.8	3.9
Balkans																
Bulgaria (1997/98)	50.3	22.4	0.8	28.8	44.6	78.7	4.2	2.7	33.9	68.9	2.1	1.0	10.7	9.8	2.1	1.7
Baltics																
Estonia (1994)	21.9	12.5	6.9	3.4	57.1	62.6	18.9	15.2	53.2	60.7	14.4	14.6	3.9	1.9	4.5	0.6
Latvia (1995)	..	..	..	..	36.8	59.7	9.2	11.5	29.4	54.8	3.9	8.2	7.4	4.9	5.3	3.3
Lithuania (1994/95)	50.6	27.9	5.5	15.7	52.3	74.6	2.7	2.8	38.0	66.7	0.8	2.0	14.3	7.9	1.9	0.8

Notes: [1] The year(s) when each FFS survey was conducted is (are) indicated in parentheses.
[2] Information not available.
Source: FFS data.

In the Central-Western group, although cohabitation is relatively common, very small proportions of young women cohabit and have children. In this respect, these countries are more similar to the Mediterranean than to the Nordic countries. Austria is an exception, where the proportion of women who cohabit and have children is closer to that of France than the other Central-Western countries. The proportions of women cohabiting and without children at 20-24 in Austria and Switzerland are among the highest in Europe. Similar observations largely apply also to 25-29 old women.

The differences in the choices made by young women in different parts of western Europe, particularly in the countries at its northern and southern ends are so large that the question arises as to whether the gulf that has opened between them will ever close. Put differently, is it possible that since the 1960s these societies have travelled along increasingly divergent paths that will never converge in spite of the fact that they have so much in common? Are the ways in which the young in different societies arrange their lives as they approach their prime years of age likely to remain permanently different, in spite of the fact that there are so many forces at work that tend to make western Europe increasingly homogeneous?

Of course, there are no answers to these questions: only time will tell. In the meantime, however, opinions continue to fill the knowledge void. According to one recently expressed prognosis, made after a decade or more of reflection, it is illusory to expect convergence (Van de Kaa, 1997). In his view, it is cultural diversity that "introduces the element of inertia in the European setting which is easy to forget, but remains very real." Indeed, it appears to us highly plausible that in the foreseeable future – say the next decade or two – the European Union will not become a "melting pot" for demographic behaviour.

Except for Bulgaria, FFS data are unavailable for the Balkans and the European CIS countries. Consequently, our analysis is confined to the Baltic and Central-Eastern countries plus Bulgaria. In many of these countries the proportions of women aged 20-24 living with their parents are at intermediate levels. Living alone is rare, except in East Germany where it is as prevalent as in West Germany. The reason behind this is the traditionally early entry into marriage: relatively large proportions of east European women – ranging between 40 per cent and 60 per cent for the majority of these countries – are married, while the proportions cohabiting are relatively low. Among the statistical outliers, East Germany and Slovenia have considerably lower proportions married and higher shares cohabiting. Estonia has close to 80 per cent of 20-24 year-old native-Estonian women living in a union, with three times as many married as cohabiting.

As a rule, the proportions of women in eastern Europe who cohabit and have children are low. In Germany and Slovenia these proportions are higher, similar to those in Austria, while in Estonia the proportion of cohabiters with children is the highest in Europe. Among women aged 25-29, the diversity is even greater, as a result of the fact that the atypical east European countries depart even more from the rest.[xi]

2. Birth control practices

The use of modern contraceptives, particularly the hormonal pill, has rapidly spread throughout much of western Europe since the 1960s, becoming the dominant means of birth control. The trend has been so pervasive in some of these countries that it was termed the "Second Contraceptive Revolution" (Cliquet and Lodewijckx, 1986, Leridon *et al*., 1987, Westoff and Ryder, 1977). In eastern Europe, the development was at best chequered, being quite marked in the areas immediately to the east of the former east-west divide. In countries further to the east and south-east it was considerably weaker and, in some instances, largely absent. Here a combination of traditional methods and induced abortion – readily available on

demand almost everywhere – became the principal means of birth control.

These differences in birth control methods across the continent survived through the 1990s. The FFS data used here shed light on the contraceptive-use patterns during these years among younger women. When combined with information on induced abortion, the data display a widely varying mix of the use of contraceptive methods and induced abortion practices across Europe.

Among younger women, the most avid contraceptive users are those who do not have a cohabiting partner but are at the same time sexually active and at risk of conceiving.[xii] In half of the twelve countries for which the relevant FFS information was used here, 90 per cent or more of these women use some form of contraception.[xiii] Eight or more out of ten use modern methods, among which we include the condom. The countries in question belong to the Atlantic, Mediterranean and the Central-Eastern groups (Table 4.3). In the countries of the two former groups, practically all women in this category aged 20-24 years use modern methods.

In the remaining half dozen countries, most of which belong to eastern Europe, the prevalence rates for modern and traditional methods combined among these women are all generally lower, approaching in some instances seven out of ten.[xiv] In addition, the reliance on traditional methods, particularly among women aged 25-29 is by and large greater. Clearly, the west European younger women in this category are considerably more sophisticated contraceptive users than their east European counterparts, except those in the Czech Republic and Hungary.

The younger women who live in unions and are sexually active and therefore at risk of conceiving have somewhat lower prevalence rates. Some among them are waiting to conceive while others are not concerned about getting pregnant and therefore do not use any method. The prevalence rates of the majority in these countries are within the range 70 to 90 per cent and only in Bulgaria and Poland are they consistently below 70. The use of modern methods is particularly widespread in Belgium and France. However, a mix of countries from various parts of Europe – Spain, Switzerland, Czech Republic, Hungary, Latvia and Slovenia – are not much, if at all, lower. Italy is an interesting case, where the vast majority of women in unions are married. While overall prevalence rates are similar to those in most other countries, roughly one-third of those using some form of contraception resort to traditional methods and this is probably a factor contributing to a relatively high incidence of induced abortion in Italy.

In a low fertility setting, such as the one typical of contemporary Europe, poor contraceptive practices go hand in hand with a heavy reliance on induced abortion, and vice versa. Figure 4.10, based on data from eleven countries, illustrates the point.[xv] Although these counties are not representative of the entire continent – note that the European CIS countries are conspicuously absent – this broad relationship is likely to hold for the whole of Europe. We know that the incidence of abortion in the European CIS countries continued to be very high throughout the second half of the 1990s but we lack information on contraceptive use for these countries.[xvi] Judging by the relationship seen elsewhere, we can surmise that the reliance on modern contraceptives in much of this region remains very limited.

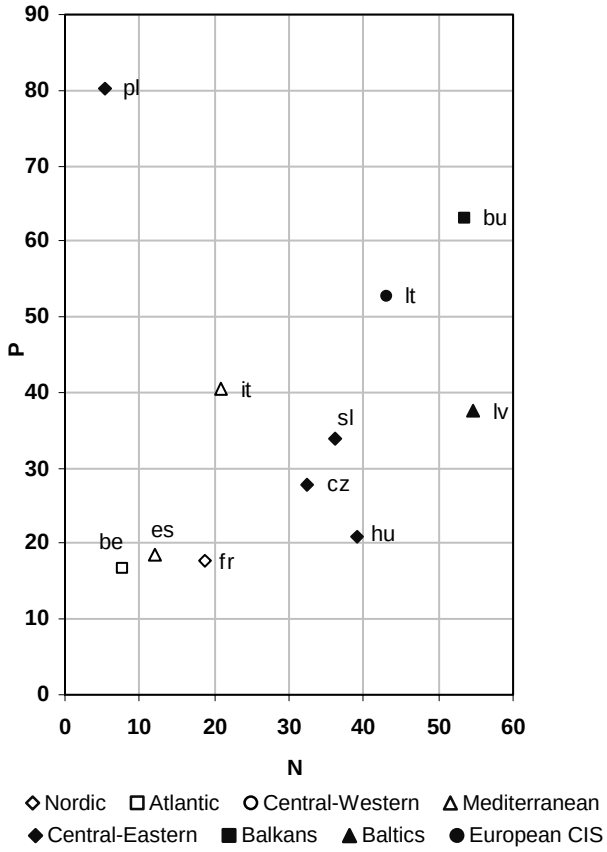
We can conclude, although only tentatively, that the spectrum of birth control practices in Europe remains extremely wide. At one end of the spectrum are some west European countries where contraceptive practices for all practical purposes are perfect. At the other end are some east European countries, in particular those in the CIS, where the use of modern contraceptives is grossly lagging and an excessive dependence on induced abortion endures.

Table 4.3. Contraceptive prevalence rates for younger women at risk by age, union status and type of contraceptive method
(in per cent)

	Not living in unions						*Living in unions*					
	20-24			*25-29*			*20-24*			*25-29*		
Region/Country	*Modern*	*Traditional*	*Total*	*Modern*	*Traditional*	*Total*	*Modern*	*Traditional*	*Total*	*Modern*	*Traditional*	*Total*
Western Europe												
Atlantic												
Belgium (1991/92)	94.5	0.1	94.6	94.8	5.2	100.0	84.2	1.3	85.5	78.0	2.7	80.7
France (1994)	96.9	0.0	96.9	84.4	2.5	86.9	88.1	2.2	90.3	78.0	4.1	82.1
Central-Western												
Switzerland (1994/95)	68.5	8.0	76.5	70.7	19.5	90.2	80.2	13.1	93.3	73.8	15.1	88.9
Mediterranean												
Italy (1995/96)	83.5	12.1	95.6	84.1	9.2	93.3	47.3	33.3	80.6	45.3	30.4	75.7
Spain (1994/95)	93.4	5.0	98.4	90.8	5.0	95.8	76.6	8.3	84.9	81.2	7.3	88.5
Eastern Europe												
Central-Eastern												
Czech Rep. (1997)	87.7	4.5	92.2	90.1	4.7	94.8	73.5	8.3	81.8	71.4	11.0	82.4
Hungary (1992/93)	87.1	8.6	95.7	83.4	9.7	93.1	74.1	8.3	82.4	82.6	7.0	89.6
Poland (1991)	7.4	2.9	10.3	5.5	11.0	16.5	22.8	32.5	55.3	26.7	36.3	63.0
Slovenia (1994/95)	69.6	11.9	81.5	68.4	11.7	80.1	65.3	13.6	78.9	66.2	15.1	81.3
Balkans												
Bulgaria (1997/98)	50.0	18.4	68.4	61.4	13.9	75.3	29.5	21.0	50.5	31.3	21.3	52.6
Baltics												
Latvia (1995)	73.5	3.4	76.9	70.4	4.5	74.9	67.2	7.1	74.3	64.0	9.9	73.9
Lithuania (1994/95)	61.8	2.9	64.7	45.5	18.2	63.7	48.6	15.9	64.5	49.5	24.5	74.0

Source: FFS data.

Figure 4.10. Proportions of women aged 20-39 at risk of pregnancy using no method or using a traditional method (P) versus the number of induced abortions per 100 known conceptions (N)
(in per cent)



Note: The observations for the various countries relate to the years when the countries conducted their FFS surveys.
Source: PAU Population Database, Council of Europe (1999) and FFS data.

The contraceptive pill is the most widely used method in western Europe. Reliance on it is somewhat larger among women not living in unions than among those who are married or cohabiting. Belgium (Flanders), West Germany and France, in that order, lead the other countries with respect to use of the pill. The next most widely used method, again more often relied upon by women not in unions, is the condom, and its use is relatively widespread in the Nordic and Mediterranean countries, as well as in Austria and Switzerland. The IUD, more often used in unions than outside of them, is the third most frequently used method. Norway is a special case, where about one quarter of 25-29 year-old women that contracept, irrespectively of union status, rely on it. Traditional methods, as pointed out earlier, are also important in a few countries, e.g. in Switzerland and especially in Italy, particularly among women in unions.

Viewed from the contraceptive-mix perspective, eastern Europe presents a truly varied picture. East Germany, in spite of being separated from West Germany until very close to the time when the German FFS data were collected, is practically identical to it. Well over 80 per cent of the younger East German women who contracept, irrespective of union status, use the pill. Disregarding Poland, the data for which are suspect, at the other end of the spectrum are Bulgaria, Latvia and Lithuania, where the pill is relatively unimportant. Here the condom, particularly

among the young women not in unions, is the most prevalent method. In Bulgaria women in unions rely heavily on traditional methods while in Latvia they tend to choose IUDs. After East Germany, the most advanced countries, as judged by their reliance on modern methods, are the Czech Republic, Hungary and Slovenia (the Hajnal line countries). They have the most widespread use of the pill, followed by the condom.

F. FERTILITY DECLINE IN EASTERN EUROPE: AN ECONOMIC AND SOCIAL CRISIS HYPOTHESIS

As shown earlier, in the late 1980s and the early 1990s partnership and fertility behaviour underwent a massive change throughout eastern Europe. Not only did period fertility and first marriage rates drop, often precipitously, but also extra-marital fertility and cohabitation spread rapidly in many instances. This led to the conclusion that the Second Demographic Transition has been making inroads into eastern Europe (Van de Kaa, 1997, Lesthaeghe and Moors, 2000).

It has been suggested that the "overwhelming preoccupation with self-fulfilment, personal freedom of choice, personal development and lifestyle, and emancipation" were the driving forces behind the Second Demographic Transition. "Rising incomes and the economic and political security which democratic welfare states offered their populations have helped" release these forces (Van de Kaa, 1996). The question is whether this explanation suggested for western Europe can help us understand fertility and partnership developments in eastern Europe in the 1990s.

As far as the rapid fertility decline in eastern Europe is concerned, it is our view that the answer is largely negative. It was the economic and social crisis of the 1990s, we argue below, that played a key role in the decline. This view is based on facts and analysis as well as conjecture.[xvii]

The economic, social and political conditions in eastern Europe during the 1990s differed greatly from those in western Europe in the 1960s, 1970s and 1980s. For more than two decades before the first oil shock hit in 1973, the west European economies grew at an unprecedented pace.[xviii] After the shock, the pace settled down to almost half of what it had been previously, while unemployment rates reached double figures, remaining at those levels in several countries up until recently. In spite of the economic slowdown, the populations of the west European countries continued to enjoy unparalleled increases in living standards. Moreover, they lived through the longest period of peace and political stability of the twentieth century.

In contrast to this, during the last ten years, much of eastern Europe has gone through a deep economic and social crisis, the magnitude of which was greater in many countries than that of the Great Depression of the 1930s. By the late 1990s, output had recovered to previous levels in only a few countries, while two-digit unemployment rates and falling or depressed incomes remain the norm. Some of these countries have experienced armed conflicts of various proportions, while political instability has been endemic in a number of the new democracies.

In parts of the region, notably in the Central-Eastern countries, the economic restructuring has been faster, the loss of output smaller and the subsequent economic recovery earlier than elsewhere. Employment declined everywhere, including the European CIS countries, where efforts were made to keep workers employed, though sometimes only nominally so. Here, the trend continued through the late 1990s. Unemployment, unknown during the socialist era (except in the former Yugoslavia) spread rapidly. In the late 1990s unemployment rates approached or surpassed 10 per cent. At the same time, rising numbers of workers abandoned the labour force, causing activity rates to decline. Evidence suggests that women grew more "discouraged" than

men; they left the work force in relatively larger numbers.

Concurrently, real wages fell everywhere. These declines were particularly large in countries where both the output fall and the resistance to employment decline were largest. The combined effect of job losses and wage reductions was marked declines in the incomes of individuals and families. Inevitably, living standards fell everywhere and poverty spread in many countries. Recently analysed data reveal that these trends were more marked in the countries to the east and south of the Central-Eastern group, that is in the Balkans, the Baltics and the European CIS countries.

Governments shared in the experience of households, in that their incomes fell as well. Consequently, public spending declined and a variety of allowances to families were scaled down or completely phased out. In particular, data indicate that the various family benefits – for example, childcare benefits and child allowances – declined not only in real terms but also relative to the depressed real wages. In addition, in the Balkans and Central-Eastern countries, many of these benefits became income-tested. Benefits accruing to two-child families declined more than those received by one-child families. This happened everywhere, except in Slovenia and Romania, where support to the family in general increased.

This retrenchment of state support to families with children further contributed to the reduction of household incomes and living standards and to the spread of poverty. Moreover the scaling-down or elimination of public subsidies for services such as institutionalised childcare or public housing imposed extra costs on families, thereby further contributing to the decline in living standards of families with children.

In industrialised societies, including those of eastern Europe, children cost money but do not contribute to family income. In this setting, adding a child to the family is equivalent to taking a long-term cut in the economic well-being for the existing members. In societies that enjoy relatively high incomes, a fair measure of state support to the family, and good prospects of continued economic prosperity, such a cut remains widely acceptable, particularly for a first child.[xix] However, where incomes are grossly depressed, state support to the family is limited and immediate prospects for economic recovery are poor or uncertain, the economic burden of a child – first or subsequent – may be unacceptably high for many. We hypothesise that this has been the case for most eastern Europeans during the 1990s, especially in the countries that have been hit hardest by the economic downturn. According to this hypothesis, the economic hardship that individuals and families experienced made them postpone or forgo births that they would otherwise have had.

A multivariate analysis based on aggregate panel data for 1989-1997 for eastern European countries (excluding the former Yugoslavia) lends support to this hypothesis (United Nations, 2000). It indicates that the fall in wage income, the principal component of household income, arising from job losses and wage cuts, plus the drop in state support to the family, have had statistically significant depressing effects on overall fertility. It appears that in order to prevent their living standards from falling even lower, as well as averting bringing children into a world where, at least for some time to come they would have to share in falling or low living standards, people chose to forego or refrain from childbearing. In this climate, their reproductive behaviour has been highly rational.

The retrenchment of the state in eastern Europe has also contributed to strains in the social fabric. In extreme cases, due to conflicts and wars, the fabric of society has been literally torn apart. In some instances, in particular in the Baltic countries, the dissolution of the federal states has created relatively large ethnic minorities in the newly independent

countries, the status of which was left unresolved for a while and, in some instances, is still unresolved today. Deviant social behaviour, including large-scale corruption and organised crime, has become commonplace in some of these societies. Although not necessarily directly affecting the vast majority of people, these various manifestations of social strains can be expected to have shaken the confidence of people in society and in its future. This could have further eroded the desire to have children during these times of historic transition.

There has been a bright side, however, of the ongoing transformation in eastern Europe, too important to be overlooked. With the change of governments, rights and freedoms long known to citizens of western democracies, but denied to people in the former socialist countries, have been reinstated throughout much of the region. Simultaneously, norms, values and attitudes consistent with the new political and economic order have begun to spread. As has been the case with other aspects of the transformation, these changes have proceeded at a speed that has differed greatly between the countries of this increasingly heterogeneous region.

The prime beneficiaries of the changes appear to have been the Central-Eastern countries and, possibly, the Baltic countries. In many areas of behaviour, including fertility and partnership behaviour, the results of these winds of change have included a broadening of the scope of individual choice and decision-making. To use the language of the proponents of the Second Demographic Transition, ideational and cultural changes have begun to spread, first and foremost in the Central-Eastern countries. Elsewhere in the region, particularly in the Balkans and the European CIS countries, the spread is lagging behind, if it has started at all. We surmise that these changes have reinforced the impact of the social and economic crisis on fertility, in an independent and negative manner.

G. CONCLUSIONS

As the 1980s turned to the 1990s, Europe experienced the last momentous event of the turbulent twentieth century. The fall of east European socialism set in motion processes that are having profound consequences for the entire continent, particularly for eastern Europe. The renaissance in the east has been painful, though somewhat less so in the Central-Eastern countries than in those further to the east and south-east. The transformation to a new political and economic order has caused major discontinuities and growing differentiation within the region. At the same time, in western Europe, economic prosperity has continued, social and political stability have endured and multifaceted integration accelerated.

In western Europe, the trends towards ever-later entry into motherhood and marriage have continued. However, there are signs that the rise in age of entry into motherhood might be coming to an end. Overall fertility and first marriage rates moved along the trends set earlier. In several cases they remained largely stable, in others they declined slightly and in a few instances they experienced a mild recovery. Tempo effects have been far more significant than quantum effects.

In eastern Europe there have been profound declines in fertility and first marriage. Starting in 1989, the year the former regimes began to fall – and this cannot be a coincidence – fertility fell, in some cases immediately, in others after a delay, and the falls were often precipitous. The period TFRs in some countries were reduced by one child per woman or more. More recently, declines have continued, but at a slower pace, in the majority of these countries. However, in five of them a slight recovery was seen in 1998 and 1999. The result is new European low levels, with eastern Europe currently having the lowest fertility in the world. A drop in first marriage accompanied this trend, although the movements of period TFMRs have been more capricious. Moreover, data for the very recent past in the easternmost

countries are incomplete. Simplifying somewhat, quantum and tempo effects combined to bring about declines in fertility and first marriage rates in the Central-Eastern countries and in some of the Balkan and Baltic countries. Elsewhere, and particularly in the European CIS countries, quantum effects dominated.

The last ten years appear to have been a period of persistent cross-country differences in cohabitation and extra-marital fertility patterns. By the late 1980s a large north-south gap had opened in western Europe as defined by variations in the propensity to choose consensual union rather than marriage as first union, and in the proportions of children born to unwed mothers. The evidence, although inconclusive, suggests that the gap between cohabitation and marriage had begun to shrink, while that for extra-marital childbearing continued to widen somewhat. This persistence of large differences during the last ten years has called into question the universality of the Second Demographic Transition and the acknowledgement that convergence in some key traits of the transition may not materialise.

In eastern Europe, information about the spread of cohabitation is limited; it is confined exclusively to the Baltic and Central-Eastern countries. There, in some instances, it has spread to levels that are intermediate to high by present-day standards, suggesting that several countries along the Hajnal line, as well as East Germany, have indeed been following in the footsteps of their western neighbours. As regards extra-marital childbearing, it has spread throughout much of the region and in some instances has approached Nordic levels. It appears that part of the rise of extra-marital fertility has been driven by childbearing among women with no partners.

The changes we have discussed above have been wrought by choices that young women made early in their fertility and partnership careers. Not surprisingly, these choices vary enormously across western Europe. The Nordic countries are profoundly different from the Mediterranean countries with respect to living arrangements – with parents or alone, having a husband or a consensual-union partner, and bearing children in such unions as opposed to marriages. The variations elsewhere in western Europe are also considerable. This raises the question as to whether such large variations are just due to the current social and economic differences between the societies in question, or whether there are ingrained cultural distinctions that significantly reinforce the variations.

In eastern Europe, which has its own features, detailed information is largely restricted to the Baltic and Central-Eastern countries and it suggests again that these societies, in spite of their socialist-era heritage, such as early and universal marriage, are breaking out of the old mould. The rest of eastern Europe is shrouded in mystery and this is where new information is greatly needed.

Birth control patterns vary greatly across the continent, ranging from “perfect” contraception in a number of west European countries to the enduring dependence on induced abortion in the easternmost countries. Western Europe leads with respect to the levels of contraceptive use and reliance on modern methods. However, the pill is not the undisputed champion among modern contraceptives. In a number of these countries, the condom and IUD have a respectable place in the contraceptive mix.

As regards eastern Europe, some of the Central-Eastern countries do not fall much behind their western neighbours, neither if one judges them by contraceptive usage levels nor by methods chosen. The Baltics and especially Bulgaria are different, however. Low contraceptive use and a heavy dependency on traditional methods in the latter country may suggest that similar conditions exist elsewhere in eastern Europe, particularly in the European CIS countries.

During the last decade, eastern Europe has experienced a decline in overall fertility that seldom occurs over such a large geographical space and within such a short space of time. It has been suggested above that the reasons for the post-baby boom fertility decline in western Europe were different to those in eastern Europe. There is evidence, which needs further examination, that it is the decline in real income and living standards, as well as the retrenchment of state support to families with children, that has played an important role in bringing overall fertility down. Economic security of the majority of the people collapsed and it made perfect sense to many to adopt a "wait and see" attitude, foregoing or postponing births until better times.[xx] The society around young people was afflicted with many ills unknown during the socialist era which did not inspire the confidence needed to bring children into this world. In our view, these have been the primary reasons almost everywhere.

The explanation for the Central-Eastern countries, however, appears somewhat more complex. These countries experienced a quick and clean break with the communist past but were still affected by the initial economic crisis. Their economies began to recover relatively early, although real incomes and living standards continued to decline even through the second half of the 1990s. They also quickly embraced western values, norms and attitudes. And it was this rapid switch to western ways, including western fertility and partnership behaviour that, in combination with the economic downturn, caused the reduction in fertility levels.

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ANNEX

This annex contains information on the geographical grouping of the European countries used in this chapter. All countries with populations above one million are included in the analysis except Albania and Bosnia-Herzegovina, for which data are not available. Some of the group labels are more appropriate than others. Moreover, some of the groups are demographically more heterogeneous than others.

The country codes used in the figures are the standard two-letter ISO codes. The only exceptions are the codes for West Germany and East Germany, which are composed of the standard code for Germany, 'de', plus additional letters, 'w' and 'e', respectively, for the two parts of the country.

White and black markings are used to identify in the figures the countries that respectively belong to the west and east European groups.

Symbol	*Western Europe*	*Code*	*Symbol*	*Eastern Europe*	*Code*
◇	**Nordic**		◆	**Central-Eastern**	
	Denmark	dk		Czech Republic	cz
	Finland	fi		Germany (E)	dee
	Norway	no		Hungary	hu
	Sweden	sw		Poland	pl
				Slovakia	sk
				Slovenia	sl
□	**Atlantic**		■	**Balkans**	
	Belgium	be		Bulgaria	bu
	France	fr		Croatia	hr
	Ireland	ie		FYR of Macedonia	mk
	UK	uk		Romania	ro
				Yugoslavia	yu
○	**Central-Western**		▲	**Baltics**	
	Austria	at		Estonia	ee
	Germany (W)	dew		Latvia	lv
	Netherlands	nl		Lithuania	lt
	Switzerland	ch			
△	**Mediterranean**		●	**European CIS**	
	Greece	gr		Belarus	by
	Italy	it		Moldova	md
	Portugal	pt		Russian Federation	ru
	Spain	es		Ukraine	ua

ENDNOTES

[i] Economic disparities are relatively well documented, while those pertaining to the social sphere are less well understood. During the period of economic and political transformation since 1989, per capita income levels in some of the transition countries (notably central Europe) were beginning to catch up on west European levels, but most of the transition countries continued to fall behind the income levels of western Europe (United Nations, 2000a). Social disparities have probably grown even more.

[ii] It was a subsequent paper by Van de Kaa (1987) rather than the joint paper that made the notion of the Second Demographic Transition accessible to English-reading audiences.

[iii] Needless to say, this almost certainly does not apply to Bosnia-Herzegovina, for which the data are unavailable and where fertility must have collapsed as the war got under way.

[iv] For France, East Germany, West Germany and Switzerland, the mean age of women at the time of first birth was derived from data on births by parity among currently married women (see Council of Europe (2000)). For the other countries, this mean was calculated from data on births by parity among all women, irrespective of marital status. The means derived from the data pertaining only to currently married women, particularly where extra-marital childbearing is relatively widespread, are likely to overestimate the age of entry into motherhood. This is likely to be the case in France and the two parts of Germany.

[v] In some of the most prosperous among them – some of the former Baltic republics, the former Czechoslovakia and Hungary – motherhood in the late 1980s started on average around 23 and in Bulgaria and Romania even earlier, that is 3-4 years earlier than in many west European countries at the time.

[vi] According to Infostat (1999), the increase in first marriage rates in 1990 and the fall in 1991 in the former Czechoslovakia were brought about by the announcement in 1990 that as of the beginning of the next year newly-married couples would be no longer entitled to loans. A number of marriages that had been planned for 1991 thus took place in 1990.

[vii] A line between Trieste and St. Petersburg proposed by Hajnal (1965) as a line of separation between west and east European marriage patterns.

[viii] See Lesthaeghe and Moors (2000) for the analysis of the quantum and tempo shifts behind the changes in fertility levels in Europe during 1965-1980 and 1980-1996/97, on which the analysis here is patterned. The conclusions Lesthaeghe and Moors drew for the 1980-1996/97 period are broadly the same as our findings for 1987-1997.

[ix] They include observed and adjusted TFRs, where the latter rates are calculated for the indicated periods. Note that whenever the two rates are approximately of the same value (e.g. for the Russian Federation), the fertility decline during the period was due to the quantum effect. Where the adjusted TFR is particularly large relative to the observed TFR (e.g. in Slovenia), the tempo effect had been strong.

[x] For each country they decomposed the change in its period total fertility rate over a specified time period into the changes in the components of the rate below age 30 and at age 30 and above. The results of the decomposition make it possible to assess the contributions to the change in TFR by the changes in fertility below and above age 30. This enabled the authors to speculate on how the postponement of fertility at younger ages and recuperation of fertility at older ages could have influenced shifts in TFR.

[xi] For example, in East Germany and Slovenia, the proportions of cohabiting women aged 25-29 with children are around 10 per cent. These are higher than the proportion in Finland and close to those in Austria, France and Norway.

[xii] Not having a partner stands here for neither being married nor living in a consensual union. The latter union is defined as a union of two persons of opposite gender who have been living together for three months or longer and sharing the same dwelling unit.

[xiii] The relevant data for Greece and Estonia had been collected, but were not available to us at the time of analysis.

[xiv] Obviously, the rates for Poland are questionable, confirming that the FFS data collected on contraceptive use for this country are doubtful. In particular, it appears that young sexually active women in Poland did not tell the truth about their contraceptive habits.

[xv] The abortion data used here come from the national statistical offices. They have been obtained through the United Nations Statistical Division or, in some instances, directly from those offices. Clearly, the Polish abortion data fail to provide adequate information on the prevalence of induced abortion in the country. Also, the Polish FFS data appear to overstate the reliance on traditional methods and/or the prevalence of unprotected sex.

[xvi] See United Nations (2000b), where the abortion ratios (the number of induced abortions per one hundred live births) were reported to have been between 150 and 200 for Belarus, the Russian Federation and Ukraine in 1998.

[xvii] What follows draws on the analysis reported in United Nations (2000b).

[xviii] The real GDP of the OECD economies as a group, which comprises most west European countries, grew at 5 per cent per annum until 1973; see Macura (1994).

[xix] The fall in fertility in western Europe over the past few decades suggests that the costs of second and higher-order children might have grown less readily acceptable than those of the first child.

[xx] Writing primarily about west European countries, Hobcraft and Kiernan (1995) identified economic security as one of the factors that likely plays an important role in decisions regarding becoming a parent. If economic security is important in affluent western Europe, something that the authors hypothesise rather than prove, then it must be critically significant in impoverished eastern Europe.

CHAPTER 5

THE STATE OF EUROPEAN UNIONS: AN ANALYSIS OF PARTNERSHIP FORMATION AND DISSOLUTION[i]

Kathleen Kiernan[*]

Until recently marriage heralded the start of a first union for most couples in Europe, children were born and reared in these unions, and death typically terminated the union. In recent decades, marriage has been transformed. In many European countries it is no longer the marker of first union, children are increasingly being born outside of marriage, and life-long marriage has been eroded by divorce. Here we examine partnership formation and dissolution for a range of countries drawn from different parts of Europe to ascertain the extent and depth of these changes as well as their implications for the private and public domains of life. The aim is to provide an overview and description of changes in union behaviour, mainly drawing on data from the UNECE Fertility and Family Surveys.

A. PARTNERSHIP FORMATION

1. Incidence of cohabitation

Since the late 1960s and early 1970s, marriage rates in most European countries have declined. One of the important engines behind the decline is the rise in cohabitation that has occurred, particularly since the beginning of the 1980s, in many European countries. A recent perspective on the incidence of cohabitation across the European Union can be gleaned from data from a series of Eurobarometer Surveys carried out in 1996 across the 15 member states. Eurobarometer Surveys are primarily opinion surveys covering a range of topics relevant to the European Union and carried out under the auspices of the administration of the European Union. The 1996 surveys had relatively large samples per country, typically in the range 3 000-6 000 respondents, depending on the size of the population of the particular country. These surveys contain basic demographic information on the respondents, including information on marital status. This includes as one of the categories "living as married" (which we relabel as "cohabiting" in our analyses), the other categories being the more conventional ones of single, married, divorced, separated and widowed. There may be under-reporting of cohabiting unions and inaccuracies in the reporting of marital status in such surveys, and such data are unlikely to be as accurate as those obtained from dedicated family and fertility surveys, but they probably reflect the relative position of different European Union countries in these developments.

Across the 15 member states, overall 11 per cent of men and women aged 20-24 reported that they were cohabiting, 13 per cent of those aged 25-29 years, and 10 per cent of those aged 30-34 years. Only 2.6 per cent of teenagers and 7 per cent of those aged 35-39 years reported that they

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were cohabiting. Table 5.1 shows, for the 15 European Union countries, the proportions of men and women aged 20-24, 25-29 and 30-34 years cohabiting at the time of the survey in 1996. The positioning of the countries generally holds across age groups and gender. In these data we cannot differentiate between cohabitations that occur amongst the never-married and those who cohabit after a marriage has broken up, but assume that at the younger ages the former is likely to be the most prevalent. Across European Union states there is a good deal of diversity in the incidence of cohabitation. Cohabitation is strikingly most common in the northern countries of Denmark, Sweden and Finland. France also has relatively high proportions cohabiting. There is also a middle group of countries which includes the Netherlands and Belgium, Great Britain, West and East Germany and Austria with intermediate levels of cohabitation. At the other extreme is the group of southern European countries and Ireland, where cohabitation is seemingly much more rare, with only a tiny minority cohabiting.

Within countries, the peak ages of cohabitation for both men and women are the twenties and in many countries the proportions cohabiting in the early twenties and late twenties are broadly similar. The proportions in cohabiting unions are typically lower in the thirties. In a period of rising cohabitation it would be expected that younger people would be more likely to cohabit than older people. However the data for Sweden and Denmark, where the prevalence of cohabiting unions has been long-standing, suggest that the drop in the extent of cohabiting unions beyond the twenties may be real rather than transitory. Moreover, we note that, in most EU countries, cohabitation, when viewed in cross-section, is a minority practice amongst people in their twenties, and even more so amongst those in their thirties.

Table 5.1. Proportion cohabiting according to age group and sex in 1996
(in per cent)

Country	*Women*			*Men*		
	20-24	*25-29*	*30-34*	*20-24*	*25-29*	*30-34*
Denmark	45	35	19	43	43	23
Sweden	39	33	22	24	39	31
Finland	28	27	16	23	29	14
France	25	30	19	13	24	27
Netherlands	17	16	8	10	23	13
Belgium	15	12	7	6	16	8
Luxembourg	10	10	-	2	2	4
Great Britain	13	12	7	11	16	9
West Germany	16	9	7	10	15	11
East Germany	13	8	4	7	11	7
Austria	10	8	9	1	10	7
Ireland	2	3	4	3	6	3
Spain	3	3	3	1	2	4
Portugal	3	1	1	1	-	2
Greece	1	1	1	2	2	-
Italy	-	-	4	-	-	3
All countries	14	13	9	9	14	11

Note: - indicates numbers too small for reliable analysis.
Source: Analysis of Eurobarometer No 44, 1996.

2. Marital status distributions

If men and women are not in cohabiting unions, then are they in marital unions? Figure 5.1 shows the proportions of women aged 25-29 years in the 15 countries who were cohabiting, single, married or separated/divorced/widowed. It is clear from these data that there is a good deal of variation in the proportions of women in marital unions. The southern European countries of Greece and Portugal, where over 60 per cent of women in their late 20s are married, exemplify one extreme. However, within the set of southern European countries there is a remarkable difference in the behaviour of Italian and Spanish women, as compared to Portuguese and Greek women: over 60 per cent of Italian women and 50 per cent of Spanish women in their late 20s are single, compared to only around one in three Portuguese and Greek women. It would seem that not only are men and women in Spain and Italy avoiding parenthood, they are also not forming partnerships, at least in their twenties. In the northern countries of Denmark, Sweden and Finland, as well as in France, the proportions in the three main marital status groups are broadly similar at around one third each. Marriage is seemingly most popular in the western European countries: notably in Great Britain, Ireland, the Netherlands and Belgium.

3. Union formation: evidence from the Fertility and Family Surveys

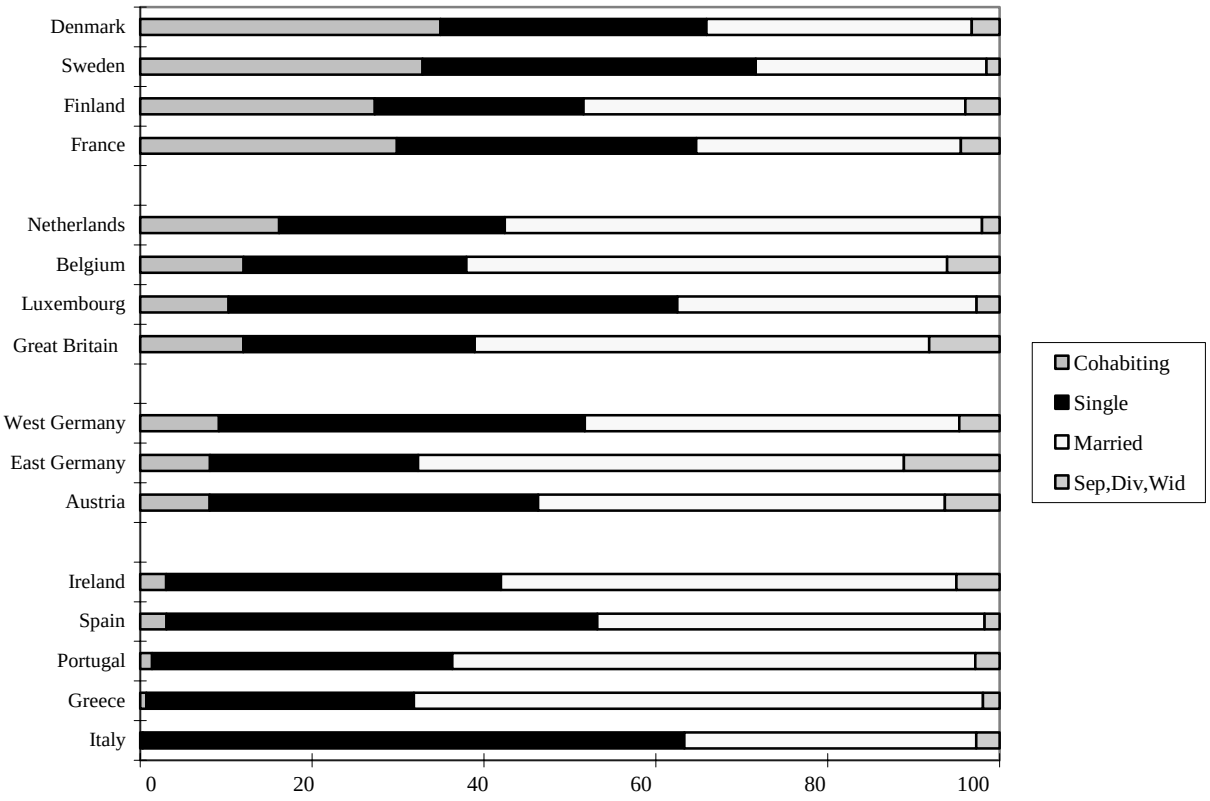
The cross-sectional information from the Eurobarometer Surveys indicates that there is a good deal of intra-European diversity in the extent of cohabiting unions, marital unions and being single. To examine partnership behaviour in more detail, we use data for a range of western and eastern European countries which conducted Fertility and Family Surveys. These countries, along with their survey dates and the age range of the female respondents are shown in Table 5.2. With the exception of Norway and Finland, the surveys took place in the first half of the 1990s. The timing and elapsed time for some of the surveys need to be borne in mind when making comparisons. In the following analyses, the countries have been sub-divided into four sets: the northern set includes Norway, Finland and Sweden; the western European set includes Austria, Switzerland France, Great Britain and Germany (we further subdivide Germany into East and West given its different history for much of the post-war period); the southern European set includes Italy and Spain; and the eastern European set includes Poland, Hungary, Latvia and Lithuania.

The Fertility and Family Surveys included a full partnership history that incorporated dates of marriages and any other co-residential heterosexual intimate relationships for both male and female respondents. The question pertaining to non-marital partnerships was as follows: “Have you ever lived in the same household with someone with whom you had an intimate relationship but did not marry?”. For Great Britain, which did not participate in the FFS project, we make use of data collected in the British Household Panel Survey (BHPS), which collected a retrospective partnership history in Wave 2, carried out in 1992. The FFS data used here come from the Standard Recode Files supplied by the individual countries to the Population Activities Unit at the UNECE. Details of the questionnaire can be found in United Nations (1992) and technical matters relating to the individual countries can be found in the Standard Country Reports (United Nations, 1996-99).

4. Never-partnered

Our examination of the Eurobarometer data highlighted the marked variations in the proportions of single people across the European Union countries. However, reporting oneself as single does not necessarily carry the implication of never having been in a union. Single as a civil status means never-married, but in common usage it has come increasingly to mean being currently without a partner, and is used by the separated and divorced as well as the never-married to describe their partnership status. The partnership histories included in the FFS surveys allowed us to isolate men and women who reported never having lived together with a partner of the opposite sex.

Figure 5.1. Marital status distribution of women aged 25-29 in 1996
(in per cent)



Source: Analysis of Eurobarometer, No. 44, 1996.

Table 5.2. Fertility and Family Surveys and British Household Panel Survey; year of interview and the age range of female respondents

Country	*Year*	*Age range*
Fertility and Family Surveys		
Norway	1988/89	20-43[1]
Finland	1989/90	22-51
Sweden	1992/93	23-43[2]
France	1994	20-49
Austria	1996	20-54
Switzerland	1994/95	20-49
Germany	1992	20-39
Italy	1995/96	20-49
Spain	1994/95	18-49
Latvia	1995	18-50
Lithuania	1994/95	18-50
Hungary	1992/93	18-42
Poland	1991	18-49
British Household Panel Survey		
Great Britain	1992	16-97

Notes: [1] Specific years of age for Norway: 20, 23, 28, 33, 38 and 43.
[2] Specific years of age for Sweden: 23, 24, 33, 38 and 43.

Table 5.3 shows the proportions of men and women in the age groups 25-29 and 30-34 years who had never been in a co-residential partnership prior to the survey. As would be expected, the proportions never-partnered decline with age and are typically higher amongst men than women. This profile replicates the patterns found in marital histories. Let us focus on women aged 25-29 years to highlight the variation across European nations in the proportions who had never partnered. The lowest proportions never-partnered at these ages are to be seen in the northern countries (around 10 per cent) and the highest proportions (25 per cent or more) are to be found in West Germany, Spain and Italy. Most countries (10 out of the 15) have never-partnered proportions that lie within the 10 to 15 per cent range.

5. Changes over time

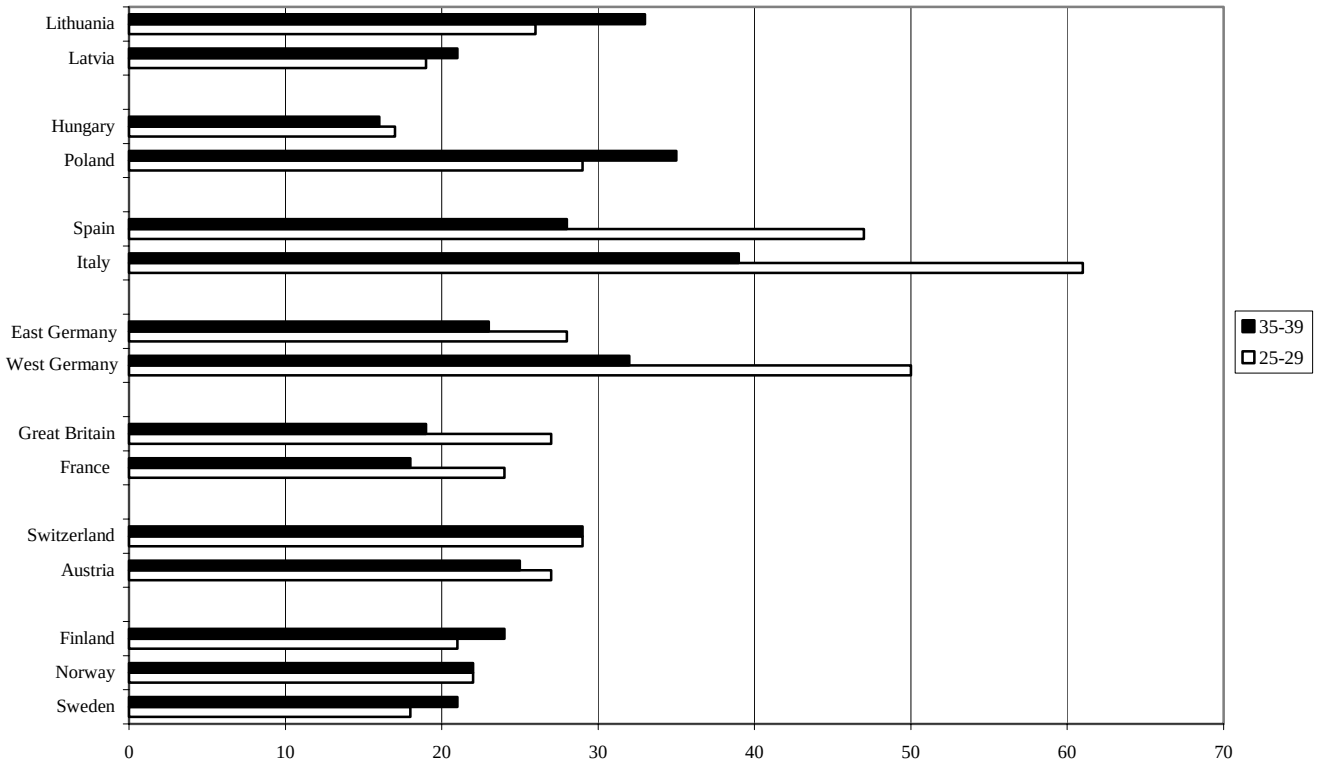
It is apparent that there are differences across European nations in the extent to which men and women have never been in a partnership in their late twenties. The next question posed was whether there has been any decline in the propensity to form partnerships over time. To this end we compared the proportions amongst women aged 25-29 at the time of the survey who had never had a co-residential partnership by the time they were aged 25 with the proportions amongst women ten years older, i.e. those aged 35-39 at the time of the survey. An examination of the lower part of Figure 5.2 shows that in all the countries, from Switzerland down to Sweden, the proportions never-partnered by age 25 has not changed very much over the decade encompassed by the two age groups 25-29 and 35-39. This implies that the marked change in the never-married population observed in these northern and western European countries is less to do with the avoidance of partnerships and more to do with the substitution of marital unions by cohabiting unions. Similarly, in the four eastern European countries there was little evidence of a decline in partnership formation over the cohorts included in this analysis. However, there is evidence from marriage registration data for the 1990s (Council of Europe, 1999) of movements towards a later age at marriage, so there may well have been changes amongst more recent

Table 5.3. Proportions of men and women never-partnered by age group at the time of the survey
(in per cent)

	Women		*Men*	
Country	*25-29*	*30-34*	*25-29*	*30-34*
Sweden [1]	10	4	18	10
Norway [2]	11	5	20	-
Finland	9	5	7	3
France	16	9	31	14
Great Britain	16	6	22	13
Austria	17	6	35	18
Switzerland	15	6	32	10
West Germany	33	15	55	28
East Germany	15	7	29	10
Spain	32	12	52	20
Italy	47	17	76	35
Latvia	13	5	16	10
Lithuania	14	8	21	6
Hungary	10	4	14	5
Poland	14	11	24	20

Notes: [1] Sweden 1959 and 1964 cohorts.
[2] Norway 1955 and 1960 cohorts.
Source: Analysis of FFS and BHPS data.

Figure 5.2. Proportion of women with no partnership by age 25 by age at the time of the survey
(in per cent)



cohorts of young people. The countries where there has seemingly been a marked decline in the proportions of women forming partnerships by age 25 are the two southern European countries of Spain and Italy, along with West Germany, and there is evidence of somewhat lesser declines in East Germany, Great Britain and France.

In Spain and Italy it is a long-established tradition that young people live at home with their parents until they marry: see Billari *et al*. (2002) for a detailed analysis of these two countries. The welfare regimes of these two nations are more family-based than state-based, as is the case in many northern and western countries (Reher, 1998). Thus, in a period of high youth unemployment and rising educational participation, particularly at the tertiary level, as has occurred in these southern European countries, it is probably not surprising that marriage tends to be delayed. Moreover, parents may be less willing to assist with the establishment of an independent household if the partnership is cohabitation rather than a legal marriage. The reason for the increase in the proportions never-partnered in West Germany may be due to an unknown extent to differences in the interpretation of the question on cohabitation, compared with other countries. In English the question posed was: "In what month and year did you start living with your first, second…partner in the same household?" The German version of the question could be understood to mean the "first common move into a common dwelling" (Hullen, 2000) which is more restrictive than the English-language question.

6. Non co-residential relationships

Having never partnered does not necessarily imply the lack of an intimate relationship. The FFS captured some information on extra-mural relationships by asking those not in co-residential unions whether they were "currently having an intimate relationship with someone who lives in a separate household". Table 5.4 shows the proportions of never-partnered men and women answering "yes" to this question for a set of countries that included it in their questionnaires. Across these

Table 5.4. Proportions of never-partnered women answering "yes" to the question: "Are you currently having an intimate relationship with someone who lives in a separate household", according to age group at the time of the survey, and the proportion amongst those living apart responding that they live apart because they "want to".
(in per cent)

Country	*20-24*	*25-29*	*30-34*	*20-39*	*Want to*
France					
Men	36	22	11	28	22
Women	36	48	30	36	27
Austria					
Men	46	38	47	43	48
Women	50	42	42	47	48
Switzerland					
Men	54	41	46	46	57
Women	54	53	43	51	66
West Germany					
Men	35	45	27	37	69
Women	50	49	43	48	74
East Germany					
Men	32	29	19	29	49
Women	43	38	30	39	42
Spain					
Men	41	45	31	40	21
Women	37	38	25	36	27
Italy					
Men	41	50	42	43	34
Women	48	58	40	49	43
Latvia					
Men	49	57	44	49	…[1]
Women	46	43	38	44	…[1]
Hungary					
Men	47	42	32	43	40
Women	43	42	17	38	42

Note: [1] Question not asked

nations we see that between a third and one half of the never-partnered under age 40 reported that they were in an intimate non co-residential relationship. There was a tendency (stronger in some countries than others) for higher proportions of the never-partnered currently in their twenties compared with those in their thirties to report they were in an intimate relationship with someone who lived elsewhere. In six of the countries, men were less likely than women to report an extra-mural relationship. In Spain, Hungary and Latvia the reverse was the case. However, only in France, West and East Germany and Italy were the gender differences statistically significant (at the 5 per cent level or less).

The respondents were also asked whether they were living separately because they "wanted to" or because they "had to" or both. The final column in Table 5.4 gives the proportion of men and women who responded that they "wanted to". There was a good deal of variation across nations in the responses to this question. Around 70 per cent of the West German and 60 per cent of the Swiss respondents said that this arrangement was a choice rather than a constraint, whereas under a

third of the Spanish and French respondents said that they wanted to live in this way. In the other countries around four out of 10 stated that they wanted this kind of living arrangement. There was seemingly no consistent difference across nations in the ways men and women responded to this question. In France, Switzerland, West Germany, Spain and Italy, women were more likely than men to express that living apart was through choice, whereas in Austria and Hungary there was little difference between the responses for the two sexes, and in East Germany the reverse was the case. However, the only significant differences (at the 5 per cent level) in the responses of men and women were for Spain, Italy and Switzerland.

From a single question such as that posed in the FFS surveys on whether one is in an intimate relationship with someone who lives elsewhere, it is unclear as to whether the respondent is referring to a romantic attachment which may or may not be exclusive, a visiting union, a "living apart together" (LAT) type relationship, or other variants, such as commuter marriages and split living arrangement where people spend some time at each other's residences. Moreover, the process of becoming a couple today is relatively uncharted territory compared with times past when there were more identifiable stages in the courtship process, including engagement, marriage and setting up home together; typically in that order. Nowadays, in countries where young people have a period of living independently from their parents before forming a union, there may well be more flexible and complex living arrangements which are not captured with traditional survey questions. If we wish to understand the chronology of romantic relationships, both co-residential and otherwise, our armoury of questions needs to be enhanced. Ascertaining linkages across households has also become more important with the growth in divorce, as there are typically continuing ties, both emotional and economic, between non-residential parents and their children. The changing demography of partnership increasingly necessitates data collection that spreads beyond the focus of residence.

7. Types of first partnership

We now proceed to an examination of types of first partnership amongst those ever-partnered. To simplify the analyses we will concentrate only on women. Here we identify three types of first partnership: namely, whether the respondents married directly with no cohabitation; whether they cohabited and then later married; or whether they cohabited and the union was continuing or had dissolved at the time of the interview. Table 5.5 shows the proportions falling into these three groups amongst women aged 25-29 and 35-39 at the time of the survey.

It is clear from Table 5.5 that amongst the younger cohort, those aged 25-29, for the majority of women in eastern and southern European countries marriage still heralds the start of a first partnership, whereas this is only the case for a minority in the northern and western European nations. In these latter two regions, cohabitation typically initiates a first union and around 30 to 40 per cent of first unions were cohabitations that had converted into a marriage with the same partner.

To assess the extent of change over time, we compared the experiences of women aged 25-29 at the time of the survey with those aged 35-39. With respect to the proportion of marrying directly, we see that it was already very low amongst the Swedish women of the older cohort. However, there have been some noticeable declines in the proportion in other countries. For example, in Norway, the proportion marrying directly was 24 per cent amongst women aged 28 years (cohort 1960) but had been 62 per cent amongst the cohort born ten years earlier (in 1950). Similarly in France we see a marked decline from 55 per cent in the earlier cohort to 21 per cent amongst the younger one; in West Germany a decline from 38 to 16 per cent; and in Great Britain a decline from 72 per cent to 37 per cent. A somewhat slower pace of change is to be

Table 5.5. Proportions of ever-partnered women by age group at time of the survey and type of first partnership
(in per cent)

Country	*Age-group 25-29*			*Age-group 35-39*		
	Married directly	*Cohabited and later married*	*Cohabited only*	*Married directly*	*Cohabited and later married*	*Cohabited only*
Sweden [1]	7	41	52	8	62	30
Norway [2]	24	40	35	62	30	7
Finland	17	43	40	31	46	23
France	21	34	45	55	33	12
Great Britain	37	33	31	72	18	10
Austria	19	41	40	30	42	28
Switzerland	19	44	37	30	52	18
West Germany	16	38	46	38	33	29
East Germany	15	35	50	21	26	53
Spain	80	8	12	91	4	5
Italy	86	8	6	91	5	4
Latvia	50	34	17	67	26	8
Lithuania	75	9	16	78	10	12
Hungary	76	14	10	84	9	7
Poland	95	3	2	96	3	1

Notes: [1] Sweden birth cohorts 1954 and 1964.
[2] Norway birth cohorts 1950 and 1960.

seen in the other countries such as Switzerland and Austria. Amongst the countries with over 70 per cent marrying directly, we see signs of change in Hungary and Spain, but this is less the case in Poland, Lithuania and Italy. These data highlight not only the diversity across European nations, but also the differential pace of change across nations.

8. Sub-group differences

As well as cross-national variation in union formation behaviour, there are also likely to be distinct variations within nations and between sub-groups of the population. The FFS surveys only included a limited amount of background information on the respondents but we were able to examine three important dimensions, namely variations according to educational level, religious observance and experience of parental separation.

Given the expansion in tertiary education that has occurred in recent decades in most European countries, we looked at the patterns of first partnership according to educational level within age groups. Table 5.6 shows the proportions for a younger cohort of women, those aged 25-29 at the time of the survey, who married directly, according to their level of education as divided into three levels. This is a relatively crude categorisation: level 3 broadly encompasses the graduate group; level 2 is a middle group with secondary education, and the level 1 group has only pre-secondary education (see Dourleijn *et al*, 2002 for an evaluation of the educational classifications used in the FFS countries). The proportions in these three educational groups varies across nations as indicated in the final column of Table 5.6, which shows the proportions of women who had attained graduate or equivalent status. Perusal of Table 5.6 shows that there are no simple observations to be made or general pattern to be seen with respect to union formation and educational level. In some countries there is little association between educational level and propensity to marry directly as opposed to commencing with cohabitation. In others there is some

Table 5.6. Proportions who married directly amongst women with a first partnership and aged 25-29 years at the time of the survey, by level of education, and proportions of all women aged 25-29 with Level 3 qualifications
(in per cent)

	Level 1	*Level 2*	*Level 3*	*Proportion with Level 3 qualifications*
Sweden	14	8	6	35
Norway	-[2]	31	23	58
Finland	14	16	19	16
France	29	19	15	30
Great Britain[1]	40	43	27	12
Austria	25	19	17	19
Switzerland	45	16	19	14
West Germany	27	14	12	12
East Germany	23	20	17	31
Spain	85	79	66	23
Italy	89	85	92	10
Latvia	-[2]	51	44	22
Lithuania	-[2]	77	74	45
Hungary	79	75	68	15
Poland	93	96	99	16

Notes: [1] Great Britain not directly comparable: Level 1 is no qualifications, Level 2 intermediate level qualifications (including GCSE to A-Levels or equivalent), Level 3 higher vocational and degree level qualifications.

[2] - indicates numbers too small for analysis.

evidence that those with the lowest level are more likely to marry directly. In yet others there is a curvilinear relationship, with the least educated and the most educated being more likely to marry directly. However, in most countries the lowest proportions marrying directly are to be found amongst those classified as having the highest level of education. So, amongst women in the latter half of their twenties who have entered a union there are indications that commencing a first union with cohabitation is somewhat more common amongst the most highly educated groups.

Turning to religion, Table 5.7 shows the proportions of women under age 20-39 who married directly, according to whether they attended church on some occasions versus those who reported that they practically never did. From the last column we see that there were wide country-to-country variations in the proportions never attending church. As one might expect, non-attendance was rare in Italy and Poland but was common in East Germany, Norway and Sweden. Within a given country, those who married directly were more likely to attend church than their contemporaries who had commenced their first partnership with cohabitation. Thus, across Europe cohabitation appears to be associated with the more secular groups within a population. This finding is in line with research for a number of developed countries which has shown cohabitation to be more common amongst the most secular groups. Other research has shown this to be the case both when cohabitation was rare as well as when cohabitation became more popular; for a detailed discussion see Lesthaeghe and Moors, (1996).

The final background factor examined is one that is pertinent to changing patterns of union formation; namely whether there had been experience of parental separation or divorce. There is evidence for the USA and Great Britain (e.g. Thornton, 1991 and Kiernan, 1992) that children who experience parental

Table 5.7. Proportions who married directly according to some church attendance versus none, amongst women who had a partnership and were aged 20-39 years at the time of the survey, and proportions of women age 20-39 who reported they had never attended church
(in per cent)

	Some church attendance	*No church attendance*	*Proportion who never attended church*
Sweden	12	4	66
Norway	50	23	67
Finland	25	14	35
Great Britain[1]	59	41	45
Switzerland	31	14	41
West Germany	32	16	43
East Germany	23	14	77
Spain	90	80	53
Italy	90	81	9
Latvia	60	51	31
Hungary	82	73	44
Poland	96	88	7

Note: [1] For Great Britain the nearest equivalent data were used. France, Austria and Lithuania did not include this question.

divorce are more likely to cohabit and have children outside of marriage.

The FFS included a question on whether the parents of the respondents had ever separated or divorced and the age at which this occurred. Table 5.8 shows the proportions of women who had married directly according to whether they had experienced parental divorce during childhood. It is clear that in all these countries the proportions marrying directly is invariably higher amongst those who did not experience parental divorce during childhood than amongst those who did. This applies in northern, western, eastern and southern European countries. It also applies in countries where marrying directly is rare and cohabitation the norm, as in Sweden, as well as in countries where marrying directly is the norm and cohabitation is relatively rare, such as Italy. All these differences were statistically significant at the 5 per cent level or less. The preference for cohabiting amongst children who had experienced a parental separation or divorce may well represent a reluctance on the part of young people with such an experience to make a permanent commitment, such as that enshrined in legal marriage. Alternatively, having gone through the experience of parental separation, they may want to be more certain about committing to a permanent relationship and may take longer in the search for their ideal partner, or may wish to test the strength of the relationship via cohabitation before committing to marriage. This consistency of the association between parental separation and cohabitation across nations suggests that this finding could be added to the list of robust associations with respect to contemporary demographic behaviour.

9. Duration of cohabiting unions

How long do first partnerships that commence with cohabitation last? This is not a question with a straightforward answer, as estimates of the duration of cohabiting unions need to take into account exit into marriage, exit through dissolution and, for ongoing cohabiting unions, censoring at the time of the interview. Life table analysis (single decrement) was used to estimate the proportions of cohabitations that had converted into marriages or dissolved by a specified time from the start of the union. Table 5.9 shows, for those countries where cohabitation is more prevalent, the proportions that had converted into marriages or had dissolved within 2 and 5 years, for

Table 5.8. Proportions who married directly by experience of parental separation or divorce at age 16 or under, amongst women aged 20-39 years at the time of the survey, and proportions of women 20-39 who had experienced parental divorce
(in per cent)

	Parental Divorce		*Proportion with parental divorce*
Country	*Yes*	*No*	
Sweden	3	7	14
Finland [1]	16	21	8
France	20	37	15
Austria	8	25	13
Switzerland	16	24	14
West Germany	17	26	14
East Germany	12	18	21
Spain	67	86	6
Italy	65	88	4
Latvia	46	62	26
Lithuania	72	77	21
Hungary	66	81	17
Poland	85	96	5

Note: [1] Finland did not ask age at parental divorce. Norway and Great Britain did not include a question on parental divorce.

women aged 25-29 and those aged 35-39 at the time of the survey.

The results indicate that there is some variation in the propensity to marry across nations and age groups. Sweden exhibits the lowest conversion rate to marriage; only one in three cohabitations had become marriages within five years of the start of the partnership. In most other countries, one in two cohabitations had converted to marriages by the first anniversary of the union. In some countries there are indications of a decline in the propensity to marry over time, most noticeably in Norway, France and Sweden, whereas in other countries there is less sign of change, for example West Germany, Great Britain, Austria and Switzerland, and in others signs of an increase, for example East Germany.

Turning to the extent to which cohabiting unions dissolve, we see that, in most countries, amongst those aged 25-29, around one in 10 had dissolved by the second anniversary of the start of the union, and by the fifth anniversary around one in three had dissolved. Looking at all the countries, more of the cohabiting unions of the younger cohort compared with the older cohort had dissolved by the fifth anniversary of the start of the union. We consider the issue of partnership dissolution in more detail in the next section.

B. PARTNERSHIP DISSOLUTION

Across Europe, divorce has increased since the late 1960s and early 1970s up into the 1980s, since when rates have tended to stabilise. However, there continues to be cross-national variations in the extent of divorce (Council of Europe, 1999). Moreover, with the rise in cohabitation, data on divorce are increasingly likely to be underestimates of the extent of partnership breakdown. Here we examine the issue of partnership dissolution using the data from the partnership histories collected in the FFS, for those countries that had medium to high levels of cohabitation. Of central interest was an assessment of the relative fragility of the different types of first unions: direct marriages, cohabitations that converted into

Table 5.9. Proportions derived from life-table analysis of first cohabiting unions that had converted to marriages or dissolved by 2 and 5 years of start of union by age of woman at the time of the survey
(in per cent)

Country	*Married*		*Dissolved*	
Age group	*2 years*	*5 years*	*2 years*	*5 years*
Sweden				
1964 [1]	8	34	16	37
1954 [1]	19	44	10	24
Norway				
1960 [1]	27	56	16	35
1950 [1]	64	81	8	29
Finland				
25-29	33	60	11	31
35-39	45	66	8	21
France				
25-29	37	63	9	31
35-39	58	78	6	17
Great Britain				
25-29	34	58	14	36
35-39	29	50	21	41
Austria				
25-29	26	54	7	26
35-39	31	50	6	18
Switzerland				
25-29	36	67	14	38
35-39	37	70	9	26
West Germany				
25-29	30	57	14	36
35-39	32	51	7	17
East Germany				
25-29	26	42	8	27
35-39	20	26	6	15
Latvia				
25-29	67	79	29	43
35-39	74	79	10	33

Note: [1] Birth cohorts.

marriage, and cohabiting unions without marriage.

1. Pre-marital cohabitation and marital dissolution

In an earlier study on a range of western European nations (Kiernan, 1999), we posed the simple question of how long does each of these types of union survive, and calculated life tables for each type. This was a simple descriptive analysis based on a known outcome. This analysis showed cohabiting unions to be generally more fragile than marital unions. Cohabiting unions that had not converted into marriages were found to be the most fragile. However, this approach showed that there was little difference in the extent to which unions had broken up by a particular anniversary after the onset of partnership for direct marriages or marriages that were preceded by a period of cohabitation. This method did not take into account the competing risks of marriage and dissolution at a given point in time.

Here we analyse the data, taking into account competing risks. We enquire whether or not marriages are more likely to break down if they are preceded by a period of cohabitation. Cox proportional hazard models were used with the survival time being the duration of marriage to dissolution or censoring at the time of the survey. Whether cohabitation preceded marriage or not was treated as a fixed co-variate. We also included a control for age at first marriage and two background factors, namely whether parental divorce had been experienced during childhood, and whether the respondent was or was not a church attendee. The first column in Table 5.10 shows the relative risks of marriage breakdown for those who cohabited prior to marriage relative to those who married directly. The second column includes a control for age at first marriage, experience of parental divorce and whether the woman attended church or not. In some countries there is evidence that those who cohabit prior to marriage compared with those that don't have a higher risk of marital dissolution (France, Germany and Sweden), but in other countries this is less the case (Norway, Finland, Austria, Switzerland and Latvia).

2. Duration of pre-marital cohabitation and marital dissolution

We also investigated whether length of cohabitation prior to marriage had any bearing on dissolution risks. For example, short duration cohabitations may have a different impact than longer periods of cohabitation, in that short cohabitations may be more likely to include people with a greater commitment to marriage than those

Table 5.10.
Relative risk of marital dissolution in a first marriage (which is a first partnership) for women who cohabited prior to marriage, relative to those who did not, amongst women aged 20 to 39 years at the time of the survey
(Relative risks derived from Cox models. Model 1 has no controls. Model 2 includes controls for age at first marriage, church attendance and experience of parental divorce)

Country	*Model 1*	*Model 2*
Sweden	1.40	1.58*
Norway [1]	0.90	0.95
Finland	1.14	1.16
France [2]	1.52***	1.63***
Austria [2]	1.23	1.24
Switzerland	1.41*	1.28*
West Germany	1.62**	1.42**
East Germany	1.32*	1.38*
Latvia	1.13	1.12

Notes: [1] Norway had no information on parental divorce.
[2] France and Austria had no question on religion.
*** p<0.0001.
** p<0.01.
* p<0.05.

Table 5.11. Relative risk of marital dissolution in a first marriage (which is a first partnership) according to whether woman cohabited prior to marriage and duration of cohabitation prior to marriage amongst women aged 20 to 39 years at the time of the survey (Relative risks derived from Cox models)

Duration of Cohabitation	*France*	*Switzerland*	*Austria*	*West Germany*	*East Germany*	*Sweden*
None	0.60*	0.65*	0.69+	0.72	0.89	0.71
1-6 months (reference category)	1.00	1.00	1.00	1.00	1.00	1.00
7-12 months	0.78	1.08	0.68	1.66	1.29	1.33
13-24 months	0.74	0.84	1.11	1.17	1.25	1.10
25-36 months	1.24	0.94	0.53+	0.97	1.53	0.96
37-60 months	1.11	0.60	0.80	1.10	1.32	1.07
61 or more months	0.66	1.17	0.61	1.28	0.67	0.72

Notes: *p<0.05.
+ p<0.10.

who cohabit more long-term. Table 5.11 shows for a selection of countries the relative risks of marital dissolution according to duration of pre-marital cohabitation. The reference category is those who cohabited for 1-6 months prior to marriage. The evidence from this simple analysis suggests that in these countries there is little variation in the relative risk of marital breakdown according to length of pre-marital cohabitation.

3. Type of first partnership and partnership dissolution

Another question addressed was the extent to which the risk of breakdown varied across the three different types of first union. In this analysis the clock starts at onset of first partnership and marriage is included as a time varying co-variate and the three states are defined as: married at start of partnership; married later after a period of cohabitation; or cohabitation without marriage. Age at first partnership and the two background factors, parental divorce and degree of religious observance were also included in the analysis. Table 5.12 shows the relative risk of partnership breakdown for the three types of designated first partnership. Model 1 indicates the gross risk and Model 2 includes controls for age at first partnership, church attendance and experience of parental divorce.

It is clear that across all the countries that continuing cohabiting unions had the highest risk of breakdown, with a level of risk that was substantially higher than that observed for direct marriages and converted unions. The story for unions that had converted into marriages is more varied. Focusing on Model 2 in Table 5.12 we see evidence of an elevated risk of breakdown for these unions in France, West and East Germany and to a lesser extent in Sweden, whilst in the remaining countries there is little difference in the risk of dissolution of converted unions compared with direct marriages. From these analyses there is robust cross-national evidence that cohabiting unions that had not converted to marriages were the most fragile unions, but that the role of pre-marital cohabitation in union dissolution is more variable across nations.

4. Parental divorce, religious observance and partnership dissolution

We showed above that in all the countries included in our analyses, children who had experienced parental divorce were more likely to commence their first partnership with cohabitation rather than marriage. We also included it as a factor in our partnership dissolution analyses. A number of studies have shown that experience of parental

Table 5.12. Relative risk of partnership dissolution according to type of first partnership for women aged 20 to 39 years at the time of the survey
(Relative risks derived from Cox models with marriage included as a time varying co-variate. Model 1 has no controls. Model 2 includes controls for age at first partnership, church attendance and experience of parental divorce)

	Model 1			*Model 2*		
Country	*Married directly*	*Cohabited-married*	*Cohabitation only*	*Married directly*	*Cohabited-married*	*Cohabitation only*
Sweden	1.00	1.61*	4.48***	1.00	1.50+	3.96***
Norway [1]	1.00	0.86	5.28***	1.00	0.85	4.92***
Finland	1.00	1.02	3.22***	1.00	1.12	3.44***
France [2]	1.00	1.47**	5.77***	1.00	1.49**	6.04***
Austria [2]	1.00	1.11	3.50***	1.00	1.01	3.08***
Switzerland	1.00	1.30+	6.06***	1.00	1.11	4.84***
West Germany	1.00	1.59**	3.18***	1.00	1.38*	3.07***
East Germany	1.00	1.35*	1.44**	1.00	1.35*	1.55***
Latvia	1.00	1.12	2.99***	1.00	1.03	2.83***

Notes: [1] Norway had no information on parental divorce.
[2] France and Austria had no question on religion.
*** p<0.0001.
** p<0.01.
* p<0.05.
+ p<0.10.

divorce is associated with an increased risk of marital breakdown in the child's own marriage (Mueller and Pope, 1977; Glenn and Kramer, 1987; Kiernan and Cherlin, 1999).

Here we assess the extent to which partnership breakdown is more common amongst children who have experienced parental divorce for the set of FFS countries included in our analysis. The first column in Table 5.13 shows the gross risk of partnership breakdown according to whether or not the woman had experienced parental divorce. The second column shows the relative risk of partnership breakdown taking into account type and age at first partnership and whether the women attended church or not. It is clear from this table that across all the countries (with the exception of France after the introduction of controls) children who had experienced parental divorce during childhood were significantly more likely to experience partnership breakdown in adulthood, compared with those without such an experience.

We performed a similar analysis depending on whether the women attended church or not, and the results are shown in the third and fourth columns of Table 5.13. For the western European countries shown here, there was an association between no church attendance and risk of partnership breakdown. However, in two of the northern countries, most noticeably in Sweden, the association was attenuated when type of first partnership, age at first partnership and experience of parental divorce were included as controls. In Latvia and East Germany there was little evidence of an association between degree of religious observance and partnership breakdown.

5. Number of partnerships

The final aspect of partnership behaviour we examined was partnership turnover. Partnership dissolution opens up the possibilities of re-partnering. With the rise in divorce that has occurred in many European countries in recent decades, men and women are increasingly likely to have several partnerships over their life. Table 5.14 shows the number of partnerships, including marriages and cohabitations, reported by women aged 35-39 years at the time of the FFS survey. It is noticeable that partnership turnover is not extensive; the majority of women have had only one partnership, in the

Table 5.13. Relative risk of partnership dissolution according to experience of parental divorce and church attendance amongst women aged 20 to 39 years at the time of the survey (Relative risks derived from Cox models with marriage included as a time varying co-variate. Models 1a and 2a have no controls. Models 1b and 2b include controls for type of first partnership, age at first partnership and either experience of parental divorce or church attendance)

	Parental Divorce		*No Church Attendance*	
Country	*Model 1a*	*Model 1b*	*Model 2a*	*Model 2b*
Sweden	1.49***	1.33***	1.39***	1.14
Norway [1]	--	--	1.74***	1.22*
Finland	2.23***	1.85***	2.03***	1.71***
France [2]	1.45***	1.03	--	--
Austria [2]	2.25***	1.90***	--	--
Switzerland	1.97***	1.62***	2.39***	1.70***
West Germany	2.02***	1.60***	2.06***	1.71***
East Germany	1.88***	1.82***	1.05	0.92
Latvia	1.44***	1.29*	0.96	0.88

Notes: [1] Norway had no information on parental divorce.
[2] France and Austria had no question on religion.
*** p<0.0001.
** p<0.01.
* p<0.05.

70-80 per cent range in most countries, though somewhat higher in Poland and the two southern European countries of Italy and Spain. Only a tiny proportion report having had three or more partnerships. Sweden had the highest proportions with three or more partners at 6 per cent, closely followed by Great Britain and West Germany with 5 per cent. Italy and Spain had the lowest levels at one per cent or less. In the rest of the countries, between two and four per cent had had three or more partnerships. Detailed studies of re-partnering are rare, but see Bernhardt (2000) on re-partnering among Swedish men and women.

C. POLICY BACKGROUND AND RESPONSES

The changing demography of partnership has far-reaching implications for the men, women and children involved. There is already an extensive and growing literature on the legacy of divorce and partnership dissolution; examples include Kiernan (1992), McLanahan and Sandefur (1994), and Bradshaw *et al* (1996). This shows the negative impact of these developments for the public and private purse, as well as the far-reaching repercussions that partnership breakdown has for the emotional and physical health, and the social and economic welfare of the individuals involved.

Here, I want to focus more on some of the implications of rising levels of cohabitation for the private and public domains of life, and in particular to examine some of the policy responses that there have already been to this development in western European nations.

In the past, ties between spouses were deemed to be of sufficient importance that marriages and divorces were included within the scope of vital registration systems. The rise of cohabitation has eroded this public acknowledgement and raises policy questions about the links between partners and unmarried parents and their children with respect to public domains of life. Many European countries are recognising that changes in union behaviour are underway and that marriage law, practices and values and the assumptions on which public policies are built are being evaluated. Here we sketch some of these developments for a range of western European countries.

Table 5.14. Distribution of women aged 35-39 years at the time of the survey by the total number of residential partnerships
(in per cent)

Country	*None*	*One*	*Two*	*Three or more*
Sweden	4	71	20	6
Norway	4	81	13	2
Finland	4	77	16	3
France	7	80	11	2
Great Britain	4	73	18	5
Austria	6	77	14	3
Switzerland	3	78	16	3
West Germany	8	73	15	5
East Germany	5	74	17	4
Spain	4	90	6	1
Italy	9	87	4	1
Latvia	4	74	20	2
Lithuania	6	79	12	2
Hungary	4	80	13	3
Poland	11	86	3	-[1]

Note: [1] - indicates numbers too small for analysis.

To date there have been a variety of policy responses to the emergence of cohabitation in different European countries. At the beginning of 1998 the Netherlands, a country with intermediate levels of cohabitation but low rates of non-marital childbearing, instituted the formal registration of partnerships for both heterosexual and homosexual couples. This made legally registered cohabitation functionally equivalent to marriage, except that cohabiting couples did not have the right to adopt. In the early 1990s, Denmark had instituted the legal registration of homosexual partnerships but the Netherlands was the first country in Europe to formalise heterosexual cohabitation. However, registered partnerships in the Netherlands were primarily instituted to meet the needs of gay couples who did not have the option of marriage. Marriage for gay couples is now available (2001), so the registration of heterosexual cohabitation may be short-lived (Schrama, 1999).

In France, which in terms of cohabitation levels is the most "northern" in that the rise of cohabitation and non-marital childbearing has followed a similar trend to the developments in the northern countries, the government instituted Civil Solidarity Pacts (PACS) in October 1999 (not without a good deal of preceding controversy). This allows homosexual and heterosexual couples to enter legal agreements that will give unmarried couples (co-residing for a minimum of three years) broadly equivalent inheritance, tax, health and tenants' rights as those now held by married couples. In France, the PACS were originally conceived as meeting the demands of gay organisations for a form of legally recognised marriage ceremony. However, to avoid homophobic attacks from the right wing, the government broadened the idea to include heterosexuals.

In Sweden, Finland and Denmark, a more pragmatic approach has been taken to cohabiting couples. Over time family law has come to be applied to married and cohabiting couples in the same way, recognising that legislation developed to meet the needs of married couples is also suited to the needs of unmarried couples (Bradley, 1996). Norway established a commission to examine the issue which reported in late 1999. This accepted the need for a law regulating heterosexual

cohabitation where this was "marriage-like", i.e. one where there are children or where the relationship had lasted for two years or more (Noack, 2000).

In Great Britain, the Lord Chancellor's Department is due to report on issues pertaining to cohabitation, but the main focus is likely to be on property issues. In Germany, the protection of the family enshrined in the constitution applies only to marriage and not to "marriage-like partnerships" (Ditch, Barnes and Bradshaw, 1996). This implies a principled commitment not to accord equal status to married and cohabiting relationships, although private law could be changed. So, just as the phenomenon of cohabitation is diverse and complex, the responses to date have been equally varied, suggesting that there are few simple straightforward solutions to this development in family life.

D. CONCLUSION

Analysis of comparative data on union behaviour from the Fertility and Family Surveys has shown there to be marked variations in the ways men and women are forming and maintaining partnerships across European nations. In this study, we have seen that in southern European, and in some eastern European countries, marriage is still the pre-eminent marker for entry into first union. However, in most western and northern European countries, cohabitation has eclipsed marriage as the marker for first partnership, and in the northern countries and France there is evidence that long-term cohabitation has become more prevalent. But whether most countries are on the same trajectory to an ultimate destination where marriage and cohabitation are largely indistinguishable, or even where cohabitation overtakes marriage as the dominant form of union, awaits the future.

The likely course of partnership dissolution is also difficult to foresee. Divorce has certainly increased in most European nations, but whether the variation in current levels is maintained, or countries gravitate to a similar high level, also awaits the future. The rise in cohabitation, and the relative fragility of such unions, perhaps signals more partnership dissolution and turnover in the future, but the saliency of this for public policy will depend on the positioning of children within the partnership history. Nevertheless, the developments in cohabitation and divorce to date have already eroded the primacy of marriage as the basis of family life (albeit to different degrees across nations). This means that public policies built upon the notion of life-long, heterosexual, legal and co-residential unions have started to be evaluated, and this process will need to continue in the years ahead.

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ENDNOTES

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CHAPTER 6

INTERRELATIONSHIPS BETWEEN PARTNERSHIP AND FERTILITY BEHAVIOUR

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A. INTRODUCTION

There have been a number of notable trends in the partnership and fertility patterns of the developed countries over the last 30 years. Traditional family forms are no longer universal. Unions are more fragile than they used to be. Children are being born later in the reproductive life. Women are bearing fewer and fewer children, as confirmed by those cohorts who have completed their reproductive careers. However, although fertility expectations remain high enough for replacement levels to be achieved, these expectations are not translating into births.

Europe can be divided into four main groups of countries, which are fairly homogeneous internally according to the levels and trends of fertility and the main characteristics of their family models (Pinnelli, 1995, 1999, 2001). A fifth group we will examine covers non-European English-speaking countries which were included in the FFS. These groups of countries can be categorised as follows:

1) Northern European (Scandinavian) countries. Of the European countries, these have seen the highest fertility in recent years, even though childbearing is often delayed. They also have the highest prevalence of non-traditional types of union.
2) Southern European countries. These have seen the lowest fertility, while their family models have remained traditional.
3) Western European countries. These have experienced trends intermediate between those of the north and the south.
4) Central and Eastern European countries (including the Commonwealth of Independent States). In these countries marriage was traditionally frequent and at young ages and childbearing was also relatively high and early. Since the beginning of the 1990s they have seen major changes. Although there are a number of notable exceptions (Macura *et al.* Chapter 4 of this volume; Pinnelli, 2001), these countries have seen a sharp decline and postponement of marriage, increasingly low and late fertility, increase in divorce rates and a rise in extra-marital fertility.
5) Non-European English-speaking countries. In this group, the transformation of partnership behaviour is very advanced, yet fertility has remained at medium-high levels, as witnessed in the United States and New Zealand, where the total fertility rates are around replacement level.

At a macro level, the interrelationships between recent trends in partnership and reproductive behaviour are

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far from clear. It is not clear whether lower fertility is the consequence of new patterns of partnership behaviour or not. Indeed, it could be that the postponement of marriage, which is evident everywhere, only influences the timing of births, and not their number. The fact that births outside marriage are on the increase in all countries may suggest that cohabitation is simply substituting marriage without having any influence on fertility. Cohabiting women may have the same fertility as their married counterparts, and so cohabitation may simply be an alternative way of forming a union which does not affect reproductive behaviour. The rise in divorces might also have no influence on fertility, if these take place before children are born or once fertility is complete. Divorce may also be followed by the formation of a new union with the subsequent birth of more children.

Looking from another perspective, we will examine whether it is reduced fertility that has favoured each of these changes in partnership behaviour. Another question we will investigate is whether fertility expectations and actual childbearing help union stability.

At the micro level, closer links between partnership and fertility can be ascertained. We can examine the effect on individual fertility of cohabiting versus marrying, and also the effect of dissolution of a union. We can similarly examine whether the arrival of a child and the presence of children alter the probability of marriage or separation.

The aim of this study is to ascertain the existence of these relationships at the micro level in certain developed countries. To represent the five groups of countries cited earlier, we selected Italy, France, Hungary, Sweden and the United States. These five countries represent good examples of the various scenarios. Firstly, looking at fertility rates: in Sweden, fertility increased between 1970 and 1990; in the United States it decreased and then increased; in Hungary it had a small decline; in France a medium decline; and in Italy a large decline. The transformation of partnership behaviour is observed most clearly in Sweden, followed by France. The main features exhibited are a high frequency of cohabitation, a high divorce rate and a very high frequency of births outside marriage. These countries also exhibit a delay in the timing of fertility. In the United States, cohabitation is less frequent than in Sweden and France, but having children out of union is more frequent and divorce rates are high. In Italy and Hungary, marriage has been only slightly substituted by cohabitation, as shown by the low percentages of births outside marriage. In Hungary the timing of fertility has been less delayed than in the other countries. The divorce rate is very low in Italy, but is higher in Hungary – almost as high as in France.

B. LITERATURE REVIEW

We present here a review of the literature concerning studies conducted at the micro level on the reciprocal influences between new patterns of partnership behaviour and fertility in developed countries.

The postponing of reproductive life has been shown to have a negative effect on fertility levels. Beets (1995) and Martinelle (1993) have demonstrated the effect of the postponement of births on the proportion of childless women at the end of their reproductive years. Later births means fewer births. This result has been confirmed by other studies, including that coordinated by Blossfeld (1995) in nine developed countries.

The progressive substitution of marriage by cohabitation has led some authors to think that these forms of union are interchangeable. On the contrary, it would seem that cohabitation has different characteristics than marriage. For the United States, Clarkberg *et al.* (1995) have shown that marriage and cohabitation are associated with significant differences in work patterns, earnings, treatment of money, use of leisure time, social relations with the extended family, division of

household labour and fertility. De Rose and Racioppi (2001) have also shown that expected fertility is lower for cohabitants than married couples in many European countries. The negative influence of cohabitation on fertility has been demonstrated in many other studies (Balakrishnan, 1989; Bracher and Santow, 1990; Carlson, 1985; Etzler, 1987; De Graaf, 1990; Haskey and Kiernan, 1989). For example, Leridon (1990) has shown that in France cohabitation not followed by marriage greatly reduces fertility. That study was on the 1941-55 cohorts, for which cohabitation was a rare form of behaviour and in some sense pioneering. When cohabitation becomes a more widespread form of behaviour, we might expect that its effect on fertility to be less, but in reality more recent studies have shown the persistence of this result. Lesthaeghe and Moors (1994) showed that cohabitants are much more likely to remain childless than married couples; this result was established for both women and men aged 30-50 in Germany, Belgium, France and the Netherlands. Manting and Post (1995) similarly showed that in the Netherlands the fertility of female cohabitants is lower than that of married women. The same is true for women not in a union, though this is a more obvious result, which few studies go to the trouble of establishing. Entry into motherhood occurs more often and sooner in marriage than in cohabitation in the United States, according to the results of the 1987-88 NFSH survey (Manning, 1995). In Finland, couples who lived longer together without marriage tended to have fewer children than the 'directly married'[i] (Lindgren *et al.*, 1993).

The negative effect of cohabitation on fertility would therefore appear to have been demonstrated. There may, however, be differences in the socio-cultural significance of cohabitation among different groups, and its consequences on fertility may therefore vary in extent. For example, in the United States, the fertility rate within cohabitation more closely approximates the fertility rate within marriage among black women than white women (Loomis and Landale, 1994). The influence of past cohabitation on entry into motherhood could be limited and the differences in fertility between direct marriage and indirect marriage modest, as found by Hoem and Selmer (1984), or more substantial, as found by Leridon (1990) for France.

Separation and divorce have clear negative effects on fertility. Di Giulio *et al.* (1999) have shown, using FFS data, that the disruption of a union reduces an individual's overall fertility in Belgium, Germany, Italy and Hungary. Lesthaeghe and Moors (1994) have shown that separated or divorced persons have a much greater probability than married persons of ending up childless. Their study covered both women and men aged 30-50 in Germany, Belgium, France and the Netherlands.

The influence of separation and divorce depends very much on the frequency of re-partnering: indeed, divorce reduces fertility by very little if a new union is formed, but obviously by more if this does not happen (Leridon, 1990). It would seem that the effect of re-partnering differs according to gender in Sweden: it increases the number of offspring for males, but not for females (Forsberg and Tullberg, 1995). This is partly a result of the fact that most children remain with their mother after parental break-up.

Literature regarding the other side of the coin, that is the effect of the birth of children on partnership behaviour, is scarce. Empirical evidence supports the hypothesis that childbearing favours marriage and union stability. Although the linkage between marriage and reproduction has greatly weakened, wanting and having children is still 'a good reason' to form a union and/or to marry. Pregnant women have a higher risk of marrying (Blossfeld *et al.*, 1995) and transforming non-marital cohabitation into a legal marriage (Manting, 1994). Indeed, the lower fertility of cohabitants may be a result of the fact

that when they decide to have – or are expecting – a baby, they frequently get married. Toulemon (1996) found that, in France, news that a baby is on the way greatly increased the probability of marriage (by eleven times) for French women aged under 35, born 1944-1968 and surveyed in 1994. Other studies confirm that the decision to convert cohabitation into marriage is often linked to the decision to have children (Etzler, 1987; Leridon and Villeneuve-Gokalp, 1989; Manting, 1991). Moreover, childbearing preferences of young women affect their choice between cohabitation and marriage; those wanting many children are more likely to choose marriage (Barber and Axinn, 1998).

Having a child favours the stabilisation of unions, whether they are cohabitations or marriages, especially with the arrival of the first child, which strongly diminishes the risk of dissolution (Hoem, 1992; Zheng, 1995). The arrival of the second child usually also contributes to the stabilisation of the union. However, births of a subsequent order have a diminished protective capacity (White, 1990). Moreover, some studies have shown that it is the presence of children of school age, even more than their number, which limits the risk of separation to some extent (De Rose, 1992; Fergusson *et al*., 1990; Trussell *et al*., 1992).

C. HYPOTHESES AND DATA

The above-mentioned results confirm that strong interrelationships exist between union formation and dissolution and fertility. In this study we attempt to verify some specific hypotheses which support the previous findings, viz:

1. Any delay influences the onset of childbearing:
   - Postponement of entry into a union, whether informal or marriage, delays and reduces individual fertility;
   - Postponement of birth of the first (second) child lowers the probability of having a second (third) or delays its arrival.

2. The form and the stability of a union influence the transition to parenthood and childbearing:
   - The type of union influences individual fertility: cohabitants have later and fewer children than married people, while indirect marriage and re-partnering may have very limited influence, or even increase fertility;
   - Union instability reduces an individual's fertility.

3. Entering parenthood and successive childbearing influence the type of union and its stability:
   - The arrival of a child favours the transformation of an informal union into marriage;
   - Children help to stabilise a union, reducing the probability of dissolution.

4. The strength of the interrelationships between partnership and fertility behaviours depends on the order of birth and the social and cultural context of the countries.

To verify these hypotheses, we used the FFS data from Italy, France, Hungary, Sweden and the United States. The women analysed had had at least one union (marriage or cohabitation), and belonged to the cohorts 1952-70. Their biographies have all been censored at October 1992 in order to render the samples of the five countries comparable.[ii]

Note that this censoring, due to the different fieldwork dates of the surveys, meant that the analysis did not include several profound changes that occurred during the 1990s in Europe, such as the substantial fertility declines seen in Sweden and Hungary.

D. PARTNERSHIP PATTERNS IN ITALY, FRANCE, HUNGARY, SWEDEN AND THE UNITED STATES

The women in the five countries observed in the analysis have very different partnership patterns. As shown in Table 6.1, 70-80 per cent of women began their first union before the age of 23, with the exception of Italian women, for whom it

Table 6.1. Women's characteristics at the moment of the start of the first union, at the birth of the first child and at the birth of the second child
(in per cent)

	Start of first union				
	Italy	*France*	*Hungary*	*Sweden*	*USA*
Age					
<23	56.0	79.6	83.2	81.5	73.5
23-26	32.1	16.3	13.0	13.3	19.1
>26	11.1	4.1	3.7	5.2	7.4
Type of union					
Direct marriage	91.7	33.9	82.7	7.5	57.4
Cohabitation	8.3	66.1	17.3	92.5	42.6
Total	100.0	100.0	100.0	100.0	100.0
Number	2052	1666	2667	2285	5448
	Birth 1st child				
	Italy	*France*	*Hungary*	*Sweden*	*USA*
Age					
<23	44.5	51.7	67.1	43.8	58.2
23-26	33.7	31.5	24.6	30.4	23.9
>26	21.8	16.8	8.4	25.9	17.9
Number of unions					
Never in union	3.0	6.1	3.7	3.6	16.8
One union	96.2	88.3	92.7	79.0	73.3
More than one union	0.8	5.5	3.6	17.4	9.9
Type of union					
Direct marriage	90.3	37.6	81.6	8.9	49.8
Indirect marriage	4.3	27.0	10.0	32.1	20.5
Cohabitation	2.0	26.0	3.2	51.1	7.0
Out of union	3.4	9.4	5.1	7.8	22.7
Total	100.0	100.0	100.0	100.0	100.0
Number	1633	1302	2411	1565	4712
	Birth 2nd child				
	Italy	*France*	*Hungary*	*Sweden*	*USA*
Age					
<23	19.7	23.6	33.2	14.9	33.4
23-26	36.6	37.6	40.4	36.8	35.1
>26	43.7	38.8	26.5	48.3	31.5
Number of unions					
Never in union.	0.1	0.2	0.1		4.4
One union	98.9	88.0	91.2	78.2	79.7
More than one union	1.0	11.8	7.7	21.8	15.9
Type of union					
Direct marriage	93.2	44.1	84.7	9.7	54.8
Indirect marriage	5.2	30.2	10.8	51.6	23.6
Cohabitation	1.0	21.6	3.0	35.5	8.7
Out of union	0.6	4.1	1.5	3.2	12.9
Toal	100.0	100.0	100.0	100.0	100.0
Number	970	805	1643	1071	3252

Source: Our elaboration of FFS data.

was less frequent (56 per cent). For Italian women, and to a slightly lesser extent for Hungarian women, the first union was almost always direct marriage (92 per cent and 83 per cent respectively). The situation of the other countries was very different: in the United States, France and Sweden many women began with cohabitation (direct marriage involved 57 per cent, 34 per cent and just 7.5 per cent respectively). Women generally allowed a few years to pass between the beginning of the union and the birth of the first child. Only in Hungary and the United States was the

percentage of women having their first child before the age of 23 around 60 per cent. In the other countries, this percentage was markedly lower (44 per cent in Italy and Sweden).

Various models of behaviour thus emerge. In Italy women marry later and therefore have their first child later. In Hungary they marry early and have their first child early. In the United States women start unions early – about half of them enter into direct marriages, and they have their first child early, either being married, cohabitants or out of union. In France they begin early with cohabitation, but then postpone the arrival of the first child. This pattern of behaviour is even more accentuated in Sweden. The percentage of women having entered into direct marriages is higher at the moment of birth of the first child in all the countries except Italy, where cohabitation is rare (this means that those who enter direct marriages more often have a child than those who cohabit). The proportion of cohabitations which had converted into marriage (indirect marriage) is also higher at the birth of the first child. Sweden has the lowest percentage of cohabitations which had converted into marriage at the birth of the first child.

The arrival of the second child takes place later in Italy, and even more so in Sweden, but sooner in France, and even earlier in Hungary and the United States, where only one third of second children are born to women aged over 26. The percentage of direct marriages increases further and the percentage of women cohabiting is reduced. The highest percentages of cohabitants were 36 per cent in Sweden and 22 per cent in France, while the lowest percentages (3 per cent and lower) were in Italy and Hungary, where the percentage of unions other than marriage was already negligible at the moment of the birth of the first child. The percentage of women who had had only one union was a little lower, except in Italy and the United States.

E. REPRODUCTIVE HISTORIES IN ITALY, FRANCE, HUNGARY, SWEDEN AND THE UNITED STATES

Reproductive histories of the interviewees were analysed. In order to ensure proper treatment of the retrospective data collected, which were right-censored so that the women were all still of reproductive age, the technique of Kaplan-Meier life tables was adopted (Maller and Zhou, 1994). The following transitions were observed: from entry into first union to birth of the first child; from birth of the first child to that of the second; and from the second to the third child. This life table analysis makes it possible to observe the successive elimination, first of women in first union but without children, then of women with one child and subsequently of women with two children, according to the length of time from the beginning of exposure to hazard in each interval.

Table 6.2 contains, for each interval, the proportion of women not having had a first, second or third child within 18, 36 and 60 months since the beginning of exposureiii (given that the women are still of reproductive age, it was not considered worthwhile in going beyond 60 months).

The differences between the five countries are already evident at the birth of the first child: the arrival of the first child is more frequent and more rapid in Italy and Hungary, where about half the women have already had their first child by 18 months after entry in the first union, and only 17 per cent in Italy and 13 per cent in Hungary did not have one after five years. In contrast, in France, Sweden and the United States the arrival of the first child is less widespread and delayed for longer. Five years on from the beginning of the first union, 32 per cent of women in France, 34 per cent in the United States and 48 per cent in Sweden still have not had a child.

Table 6.2. Life tables results. Proportions of women not bearing a child at 18, 36 and 60 months since the beginning of exposure (women born 1952-1970, censored in october 1992)

Interval length	*1st child*				
	Proportions since start of first union				
Months since the start of first union	*Italy*	*France*	*Hungary*	*Sweden*	*USA*
18 months	51.1	63.5	45.2	83.2	70.0
36 months	28.2	49.2	22.6	66.2	48.9
60 months	16.7	31.5	13.1	47.5	34.1
	2nd child				
	Proportions since first birth				
Months since first birth	*Italy*	*France*	*Hungary*	*Sweden*	*USA*
18 months	81.5	80.9	76.1	72.4	72.7
36 months	61.0	55.9	50.5	42.1	47.5
60 months	40.5	39.1	33.7	26.1	30.5
	3rd child				
	Proportions since second birth				
Months since second birth	*Italy*	*France*	*Hungary*	*Sweden*	*USA*
18 months	94.6	87.0	93.3	90.4	82.8
36 months	87.4	72.9	86.4	74.7	67.8
60 months	78.1	57.5	80.6	59.7	54.9

Source: Our elaboration of FFS data.

The majority of women who have a first child go on to have a second: this transition is more frequent and more rapid for Sweden (only 26 per cent have not had one after 5 years), and then the United States (31 per cent), Hungary (34 per cent), France (39 per cent) and Italy (41 per cent). Once the second child has been born, transition to a third involves almost half the women in Sweden, the United States and France. In Italy it is a much smaller percentage, where a good 78 per cent still have not had a third after 5 years; similarly in Hungary, where the corresponding figure is 81 per cent.

Differences in the process of family building in the five countries are clearly evident. In Italy and Hungary, the birth of a first child shortly after the beginning of a union is normal, but it is rare for childbearing to go beyond a second child. In France, Sweden and the United States, union and fertility are much more loosely related. Not everyone begins procreation; however, once they have begun they proceed more easily to have a second and then a third child.

F. THE ARRIVAL OF THE FIRST, SECOND AND THIRD CHILD ACCORDING TO THE TYPE AND NUMBER OF PARTNERSHIPS

We wanted to study how the arrival of children of different orders varies in the five countries being considered depending on various partnership forms. To do this, we constructed Kaplan-Meier survival tables showing the fraction of women remaining without a first, second and third child, stratified according to type of union and number of unions at the moment of the beginning of each of the three intervals (Table 6.3). We employed log-rank tests to determine whether the observed differences were statistically significant at the .05 level or less. The modalities were direct marriage and cohabitation for the first interval, to which were added, for the subsequent intervals, two or more of the following: indirect marriage and out of union at the moment of birth of a child, and never in union, experience of one union only, and experience of more than one union. Where certain modalities were rare they were grouped into the 'Other' category. Note that having different life

Table 6.3. Proportions of women not bearing a first, second and third child by 36 and 60 months since the beginning of exposure, by type of union and the number of unions (women born 1952-1970, censored in october 1992)

				1st child		
				Proportions since start of first union		
Interval first union to first birth		*Italy*	*France*	*Hungary*	*Sweden*	*USA*
		+[1]	+	+	+	+
Type of union at start of first union						
Direct marriage	36 months	25.8	28.0	18.4	33.3	41.2
	60 months	14.6	15.4	10.0	20.2	25.7
Cohabitation	36 months	55.0	60.6	43.3	68.9	59.4
	60 months	40.1	40.3	28.7	49.7	45.6
				2nd child		
				Proportions since first birth		
Interval first birth to second birth		*Italy*	*France*	*Hungary*	*Sweden*	*USA*
		ns[2]	+	+	+	+
Type of union at first birth						
Direct marriage	36 months	60.5	50.7	49.7	34.6	41.9
	60 months	40.0	31.8	32.2	23.7	25.4
Indirect marriage	36 months		51.7	53.8	31.4	43.0
	60 months		34.5	43.1	17.6	27.6
Cohabitation	36 months		63.3	49.2	45.0	51.4
	60 months		46.7	37.1	27.0	38.5
Out of union	36 months		71.3	59.4	74.9	61.9
	60 months		64.7	41.4	56.1	41.4
Other	36 months	65.4				
	60 months	44.5				
Number of unions at first birth		*ns*	*ns*	*ns*	+	+
Never in union	36 months		65.0	52.6	67.3	57.7
	60 months		57.2	33.9	47.9	37.3
One union	36 months	61.0	54.6	50.3	40.8	45.1
	60 months	40.2	37.5	33.3	25.0	28.4
More than one union.	36 months		68.3	53.9	43.0	46.9
	60 months		41.7	47.2	26.4	34.7
Other	36 months	61.2				
	60 months	47.3				
				3rd child		
				Proportions since second birth		
Interval second birth to third birth		*Italy*	*France*	*Hungary*	*Sweden*	*USA*
		+	*ns*	+	*ns*	+
Type of union at second birth						
Direct marriage	36 months	87.7	71.9	89.1	70.6	68.6
	60 months	78.7	55.6	83.6	53.4	55.1
Indirect marriage	36 months		73.6	68.9	73.1	67.9
	60 months		60.8	63.9	56.8	58.4
Other	36 months	83.4	73.4	73.7	77.6	68.0
	60 months	69.2	56.4	62.2	64.8	51.0
Number of unions at second birth			*ns*	+	+	*ns*
One union	36 months		72.9	87.0	76.6	67.5
	60 months		56.8	81.3	61.3	54.0
Other	36 months		73.4	78.7	67.0	63.4
	60 months		63.9	72.2	53.0	58.6

Notes: [1] + statistically significant ($p<0.05$).
[2] ns not statistically significant.

Source: Our *elaboration* of FFS data.

tables for each birth interval allowed us to study the association between partnership models, with single order fertility controlling for past reproductive activity: variability in the results among birth orders was seen as proof of the interrelationship between reproductive and partnership processes.

The surviving proportions at first birth (top panel of Table 6.3) show that, in every country studied, it is women that cohabit rather marrying directly into their first union who stay longest without children or who most often end up as childless.

Women who have their first child out of union show a lower probability of having a second child within five years of the birth of the first compared to women in union. However, only in Sweden and the United States are the differences significant and only in the United States is this phenomenon fairly frequent.

The arrival of the second child is also more frequent and happens sooner for married women than for cohabiting women in the three countries where cohabiting is quite or very frequent (i.e. France, Sweden and the United States). But the differences between cohabitation and marriage are much less for the arrival of the second child than for the arrival of the first. In Italy, where forms of union other than marriage were grouped into a single modality, the differences are not statistically significant. In Sweden, women who were married indirectly at the time of the first child's birth (where this situation is very common) have a second child more quickly and slightly more often than directly married women. The arrival of the second child probably slightly accelerates the transformation of cohabitations into marriages. In the other three countries (France, Hungary and the United States), on the other hand, indirect marriages are less common, and exhibit fewer second children and later, but the differences are not great.

We looked at whether having had more than one union at the time of first birth has a significant effect on whether a women goes on to have a second child. In Italy, France and Hungary this situation is rare and no significant effect was observed. In Sweden and the United States, where it is much more common, there was a significant difference, with women having experienced more than one partnership being somewhat less likely to have a second child, or if they do, it arrives later.

As far as the third child is concerned, cohabitants are grouped in the 'Other' category, together with the few cases of women not in union at the beginning of exposure. Survival fractions by type of union are slightly different and statistically so only in Italy, Hungary and the United States. In these countries, the directly married women with two children have the lowest probability of having another child. This result leads us to think that the group of women moving to a third child has certain unique characteristics.

In Hungary and Sweden, the proportions of women not having a third birth amongst those having had more than one union (and here we included in the 'Other' category the extremely rare cases of women who had never had a union when their second child was born) are significantly lower than those of women having had only one union. In France and the United States, the differences between the proportions are not significant. Note that we did not construct life tables for Italy for the third interval due to the very limited number of cases not belonging to the 'One union' category at the birth of the second child.

In conclusion, non-marital cohabitation is associated with a lower probability of giving birth to a first child and a second child, and postpones their arrival, compared to marriage. Women not in a union at the birth of the first child have a much lower likelihood of having further children. Women who have entered an

indirect marriage have a lower probability of having a second and third child and their births are delayed compared to the directly married in all but a few exceptions. Those with more than one union show a reduced frequency of having a second child and delay its arrival; the results are mixed for the arrival of the third child. What is clear is that any form of union other than direct marriage is associated with a lesser and later probability of having a first and second child.

From this analysis, our hypothesis is basically confirmed that partnership and fertility behaviour are interrelated, with somewhat different effects of partnership forms on the arrival of children of different orders.

G. PARTNERSHIP MODELS AS DETERMINANTS OF THE QUANTUM AND TEMPO OF FERTILITY

Having verified the existence of the association between partnership and reproductive behaviour, we then attempted to measure the effect of type and number of unions on fertility, controlling for other individual characteristics. Through the application of mixture models (Farewell, 1982), we estimated the effect of each covariate measured at the beginning of the period of exposure on quantum – i.e. on the frequency of the birth of the first, second and third child – and on tempo – that is on the time it takes for the birth of the first, second and third child to occur. A positive value for quantum represents an increase in the likelihood of having a child of a given order, while a positive value for tempo represents a decrease in the time it takes. The opposite is true for a negative value (see Annex for details on the method).

The following covariates were included:

- Type of union (direct marriage or cohabitation for the first birth; also indirect marriage or out of union for the for the second and third birth);
- Number of unions (only for the intervals between children; this included never in union, only one union or more than one union, in order to take account of separation and re-partnering);
- Age at the beginning of exposure;
- The length of the interval between first and second child for models concerning the arrival of the third child;
- Women's education (highest level ever reached. For countries other than the United States, low = less than ISCED level 2, medium = ISCED level 2, and high = ISCED level 3. For the United States the levels were: less than high school, high school, some college attendance, and college graduate);
- Women's employment (having had some experience of work: before the first union; from the beginning of the first union to the first birth; or between the first and the second birth, contrasted to no experience at all. Data available for comparative analyses did not make it possible to include other more refined indicators of women's work commitment);
- Urbanisation of place of residence at the moment of the survey (greater than or equal to 100 000 inhabitants; the size of home town being a contextual indicator of modernisation);
- Religious observance (frequency of church attendance: high = at least once a month; medium = at religious festivals or once a year; low = not religious at all or practically never attending religious rites. This information was not available for France);
- Birth cohort in 3-year bands, in order to monitor the temporal trend (for Sweden, single year cohorts 5 years apart were used, as only these were available).

For the purpose of our current discussion and according to our main hypotheses, we will concentrate our comments on the effect of partnership

related covariates, age and cohort[iv], and will not present the results for the others, not to establish causal links between individual characteristics and fertility, but to compare the effects that partnership choices have on reproductive behaviour across countries, other variability sources being controlled. Results are presented in Table 6.4.

To be in any type of union other than marriage usually has a negative effect on fertility, both on its quantum and, even more so, on its tempo. But this depends both on the type of union and on the order of birth. If the first union was cohabitation rather than a marriage, the effects are always negative and significant, both on the quantum and on the tempo of the birth of the first child. Beginning life as a couple with cohabitation rather than marriage is thus confirmed as a choice which can lead to childlessness and postponement of the birth of the first child, even when other variables which might possibly be of influence are controlled.

For women who have already had a first child, the effect of the type of union is more varied: at the moment of birth of the first child, their situation may have changed compared to the beginning of the first union, cohabitations may have been converted into marriages and this group may also include women who have had their first child without being in a union at that moment. Moreover, there may have been several unions (serial monogamy) and another variable is therefore used in order to indicate whether there has been only one union or more than one. If the couple has had a first child during cohabitation without getting married, in most cases they are less likely than a married couple to have a second child, and in all cases they will have it later. If the couple has had two children without getting married, the probability of having a third is always actually higher than that of married couples, even if its arrival is postponed. It is clear that these are cases of special, long-consolidated cohabitations, in which couples behave differently from those without children.

If the woman had a first or second child without being in a union, the probability of her having another one is always lower compared to married women, and the arrival of the child is postponed.

In the case of women marrying 'indirectly', on the other hand, the positive effects balance the negative ones and are significant in only a few cases. Having had more than one union has both positive and negative effects on the quantum and/or timing of the arrival of the second child. Two positive effects are significant (in particular on quantum in France and on tempo in Sweden). The effects on the arrival of the third child are positive on quantum in half of the cases and on tempo in all cases, which is consistent with the hypothesis of the positive action of re-partnering. The effects are significant only in the United States.

The effects of age are, in most cases, negative (40 out of 60 effects), but they differ according to the interval being considered (the number of negative effects grows with increasing order of birth), and across the countries. In France the situation is completely different for the first child: the probability of having a child is greater, and the timing is shorter, if the union begins after the age of 23. In Sweden, this positive effect is also extended to the second child. Our proposed explanation of this is that in Italy, Hungary and partially in the United States it is more common to enter into a union in order to have children, and the postponement of a union or of the first birth are the result of an attitude which is different from the norm, and less favourable to procreation. In France and Sweden, on the other hand, young people often enter into a union without any immediate reproductive plan. However, if a union is entered into later, this leads to an acceleration of the timing of the first birth and also with the second in the case of Sweden.

Table 6.4. Results[1] of mixture model analysis: effects of the variables on quantum and tempo of the first, second and third birth

	Italy					
	1st birth		*2nd birth*		*3rd birth*	
	quantum	*tempo*	*quantum*	*tempo*	*quantum*	*tempo*
Age <22	0	0	0	0	0	0
Age 23-26	-0.488	-0.119	-0.241	**-0.184**[2]	-0.242	-0.076
Age >26	0.119	-0.117	-0.066	**-0.308**	-0.286	0.364
Cohort 1952-1954	0	0	0	0	0	0
Cohort 1955-1957	-0.228	-0.103	-0.207	-0.041	0.378	**-0.402**
Cohort 1958-1960	-0.037	**-0.219**	0.261	**-0.230**	0.307	**-0.650**
Cohort 1961-1963	0.631	**-0.322**	0.488	-0.161		
Direct marriage	0	0	0	0	0	0
Other type of union	-1.079	**-0.453**	0.243	0.085	**2.228**	-0.509
One union			0	0		
Other			-0.621	0.017		
Interval 1st-2nd child (months)						
<25					0	0
25-40					-0.119	0.120
>40					**-0.933**	0.285
	France					
	1st birth		*2nd birth*		*3rd birth*	
	quantum	*tempo*	*quantum*	*tempo*	*quantum*	*tempo*
Age <22	0	0	0	0	0	0
Age 23-26	0.035	0.011	**-0.680**	-0.001	-0.613	-0.299
Age >26	**0.260**	0.055	-0.746	-0.003	-0.773	**-0.682**
Cohort 1952-1954	0	0	0	0	0	0
Cohort 1955-1957	0.220	0.119	0.046	0.113	-0.117	**-0.369**
Cohort 1958-1960	-0.581	0.049	0.263	-0.050	0.450	-0.184
Cohort 1961-1963	0.154	-0.078	0.360	**-0.386**		
Direct marriage	0	0	0	0	0	0
Indirect marriage			-0.210	0.034	-0.175	-0.120
Cohabitation	-0.547	**-0.523**	-0.472	-0.247		
Out of union			-0.700	**-0.997**		
Other type					0.785	-0.364
One union			0	0	0	0
Never in union			0.476	0.548		
More than one union			**1.783**	-0.152	-0.260	0.110
Interval 1st-2nd child (months)						
<25					0	0
25-40					**-1.078**	0.196
>40					**-0.735**	-0.314

Table 6.4. (continued)

	Hungary					
	1st birth		*2nd birth*		*3rd birth*	
	quantum	*tempo*	*quantum*	*tempo*	*quantum*	*tempo*
Age <22	0	0	0	0	0	0
Age 23-26	**-0.666**	-0.087	**-0.590**	-0.132	**-0.472**	0.139
Age >26	**-1.840**	**0.400**	**-0.888**	0.034	-0.503	-0.262
Cohort 1952-1954	0	0	0	0	0	0
Cohort 1955-1957	0.397	-0.003	0.113	0.003	-0.246	-0.013
Cohort 1958-1960	-0.155	0.045	0.196	-0.050	0.419	0.019
Cohort 1961-1963	0.093	0.062	0.297	-0.060		
Direct marriage	0	0	0	0	0	0
Indirect marriage			**-0.7278**	**0.2841**	**1.063**	0.3259
Cohabitation	**-0.654**	**-0.575**	0.473	-0.212		
Out of union			-0.629	**-0.629**		
Other type					**2.416**	-0.283
One union			0	0	0	0
Never in union			0.540	0.369		
More than one union			-0.293	0.094	0.219	0.138
Interval 1st-2nd child (months)						
<25					0	0
25-40					**-0.760**	-0.311
>40					**-0.874**	-0.193

	Sweden					
	1st birth		*2nd birth*		*3rd birth*	
	quantum	*tempo*	*quantum*	*tempo*	*quantum*	*tempo*
Age <22	0	0	0	0	0	0
Age 23-26	0.263	0.154	0.188	**0.220**	0.026	**-0.372**
Age >26	-0.365	**0.752**	0.790	**0.250**	0.012	-0.387
Cohort 1954	0	0	0	0	0	0
Cohort 1959	-0.231	**-0.213**	0.322	**0.214**	**1.231**	**-0.295**
Direct marriage	0	0	0	0	0	0
Indirect marriage			0.585	-0.178	0.446	0.018
Cohabitation	**-1.066**	**-0.822**	0.203	**-0.480**		
Out of union			-0.689	**-1.403**		
Other type					0.797	-0.321
One union			0	0	0	0
Never in union			0.316	0.535		
More than one union.			-0.649	**0.259**	0.411	0.233
Interval 1st-2nd child (months)						
<25					0	0
25-40					-0.463	-0.285
>40					**-0.892**	0.260

Table 6.4. (continued)

	USA					
	1st birth		*2nd birth*		*3rd birth*	
	quantum	*tempo*	*quantum*	*tempo*	*quantum*	*tempo*
Age <22	0	0	0	0	0	0
Age 23-26	**-0.329**	-0.023	-0.242	0.024	-0.264	-0.067
Age >26	**-0.610**	0.079	**-0.652**	-0.026	**-0.741**	-0.209
Cohort 1952-1954	0	0	0	0	0	0
Cohort 1955-1957	0.095	-0.052	0.028	0.028	0.225	-0.143
Cohort 1958-1960	0.186	-0.004	0.014	0.007	**0.463**	-0.163
Cohort 1961-1963	**0.364**	-0.072	0.294	-0.029		
Direct marriage	0	0	0	0	0	0
Indirect marriage			-0.065	0.071	0.036	-0.036
Cohabitation	**-0.861**	**-0.386**	**-0.981**	-0.103	0.441	0.206
Out of union			**-0.997**	**-0.779**	0.058	-0.188
One union			0	0	0	0
Never in union			0.316	**0.313**	-0.204	-0.025
More than one union			-0.059	0.046	**-0.439**	**0.310**
Interval 1st-2nd child (months)						
<25					0	0
25-40					**-0.392**	**-0.247**
>40					**-0.350**	**-0.310**

Notes: [1] Controlled for women's education, employment, religious observance (not included for France) andurbanisation.

[2] All significant effects (with the posterior distribution not containing 0 between 2.5 and 97.5 percentiles) are in bold.

Source: Our elaboration of FFS data.

Comparing different cohorts should indicate the presence of any temporal trend. However, there does not appear to be any clear trend between the cohorts born 1952-1954 and those born 1961-1963. We must remember that the analysis is based on reproductive histories, and therefore measures past fertility. Also, the surveys were conducted in the first half of the 1990s, and therefore cannot detect recent trends such as the fall of fertility in Hungary and Sweden in the 1990s. As far as quantum is concerned, 5/13 of the effects are negative for the first child, only 1/13 for the second, and 2/9 for the third. As far as tempo is concerned, 9/13 of the effects for the first, 9/13 for the second, and 8/13 for the third are negative. In conclusion, the trends of the most recent cohorts indicate that the transition to parenthood is more often put off compared to in the past; however, once the first child has been born, having a second or even a third is more frequent than before, even if these births are further postponed. Postponement is certainly the most evident trait for all the orders of birth: a good nine out of ten significant effects point in this direction.

For the models concerning the arrival of the third child, the time interval between the first and second child was added as a covariate: a long interval has a negative effect both on quantum (always, and significantly), and on tempo (6 out of 10 effects are negative, but significantly so only for the United States).

Italy is the country with the most negative effects on childbearing for all birth orders, testifying to difficulties being experienced in following even traditional models of family behaviour. This is probably due to the low degree of institutional support afforded to women

and children in that country (Pinnelli, 2001).

H. CHANGES IN THE UNION AS DETERMINANTS OF BIRTH TIMING

Finally, we applied hazard models (Cox and Oakes, 1984) to the same dependent variables, in order to observe the influence of changes in family status (methodological details are supplied in the Annex).

The use of hazard models makes it possible to add to the co-variates various time-dependent variables concerning the history of unions, and thus to observe the influence on the construction of a family of such factors as: the passage from cohabitation to marriage; the dissolution of a union; or the formation of a new union during the period of exposure. Comparison of the results of mixture models and hazard models, as far as the variables common to the two types of models are concerned, does not substantially modify the picture already described, so we shall limit our comments just to the results concerning the time-varying variables.

For all three intervals, the time-varying variables clearly show that the transformation of cohabitation to marriage has a positive effect (Table 6.5). Separation, on the other hand, always has a significant negative effect on the arrival of children of any order. A second change might be a new union or a separation, depending on the previous state. This has a negative effect in the case of separation and a positive one in the case of a new union. The only exception to this result is for the third interval in Hungary, where separation has a significant positive effect on the arrival of the third child. The result for Hungary may be explained bearing in mind the following: both in the case of Hungary as well as for France, due to the low numbers involved, changes with contrasting effects have been grouped together, i.e. both separation and new union of those previously not in a union. In both countries separations account for most of the changes (78 per cent in both countries). In Hungary, however, it is more common for separation to be followed by a second union (43 per cent in Hungary but only 31 per cent in France), and we know that this makes the birth of a third child more probable. Moreover, women who have always been in a union are much less likely in Hungary to have a third child than in any of the other countries, and this makes positive the effect (calculated as a relative value) of the other category.

I. FERTILITY AS A DETERMINANT OF PARTNERSHIP BEHAVIOUR

The analysis of the influence of the birth of children on partnership behaviour is less complex than the previous analyses. We considered only two types of model. First, we applied hazard models to the probability of transformation of cohabitation into marriage, taking the arrival of the first child as a time-dependent explanatory variable. The exposure starts from two months after conception, i.e. in practice from the moment at which pregnancy is noticed. The results (Table 6.6) clearly show that the arrival of a child is a factor favouring the transformation of cohabitation into marriage. The effect is greatest in the United States and France and least in Sweden.

Secondly, we applied hazard models to the probability of union dissolution, taking the number of children as a time-dependent explanatory variable. The control variables used are the same ones used in the previous models.

The presence of children strongly discourages the dissolution of a union: this is a very important factor, with significant negative effects of growing intensity as the number of children grows. In this case the effects are strongest in Italy but weaker in France and the United States.

The fact that the same countries have in common similar results in the two types of models may be explained by the following interpretation. Italy and Hungary are the countries with the most traditional

Table 6.5. Results[1] of hazard model analysis: effects of the variables on transition to first, second and third birth. Models include time-dependent variables

	First interval: first union to first birth				
	Italy	*France*	*Hungary*	*Sweden*	*USA*
Age					
<19					0
<22	0	0	0	0	**-0.17**[2]
23-26	**-0.19**	0.07	**-0.15**	0.06	**-0.36**
>26	**-0.18**	**0.28**	-0.12	**0.38**	**-0.34**
Cohort of birth					
Cohort 1952-1954 (1954 for Sweden)	0	0	0	0	0
Cohort 1955-1957 (1959 for Sweden)	0.02	**0.14**	**0.10**	-0.04	-0.01
Cohort 1958-1960 (1964 for Sweden)	-0.03	-0.08	0.01	-0.07	0.05
Cohort 1961-1963 (1969 for Sweden)	-0.09	0.02	**0.11**	-0.13	0.08
Cohort 1964-1970					0.08
Type of union					
Marriage	0	0	0	0	0
Cohabitation	**-1.25**	**-0.95**	**-0.88**	**-1.07**	**-0.86**
Change in the union					
No change	0	0	0	0	0
Marriage	**1.57**	**1.09**	**0.81**	**1.06**	**0.87**
Separation/divorce	**-0.49**	**-0.66**	**-1.43**	**-1.47**	**-1.10**
Second change in the union					
No change		0	0	0	0
New union			**1.66**	**1.87**	**1.14**
Separation/divorce			**-0.53**	**-0.97**	**-0.76**
Any change		0.06			
	Second interval: first birth to second birth				
	Italy	*France*	*Hungary*	*Sweden*	*USA*
Age					
<19					0
<21	0	0	0	0	0.07
22-24	**-0.16**	**-0.17**	**-0.18**	0.07	0.03
25-27	**-0.24**	**-0.21**	**-0.34**	0.06	-0.10
>27	**-0.43**	**-0.41**	**-0.34**	**0.22**	**-0.33**
Cohort of birth					
Cohort 1952-1954 (1954 for Sweden)	0	0	0	0	0
Cohort 1955-1957 (1959 for Sweden)	-0.09	0.08	0.03	**0.26**	0.04
Cohort 1958-1960 (1964 for Sweden)	-0.04	0.07	0.06	**0.51**	0.00
Cohort 1961-1963 (1969 for Sweden)	0.03	0.06	0.07	**0.34**	0.03
Cohort 1964-1970					0.09
Number of unions					
One union	0	0	0	0	0
Never in union		0.46	0.06	-0.03	0.02
More than one union		**0.46**	0.33	**0.23**	0.00
Other	**0.73**				
Type of union					
Direct Marriage	0	0	0	0	0
Indirect marriage		-0.03	**-0.16**	-0.00	**-0.08**
Cohabitation		**-0.40**	0.09	**-0.25**	-0.39
Out of union	**-0.77**	**-1.19**	**-0.99**	**-1.12**	**-0.72**
Change in the union					
No change	0	0	0	0	0
Marriage		-0.09	0.30	**0.29**	**0.29**
Separation/divorce	**-0.37**	**-1.36**	**-1.09**	**-1.10**	**-0.94**
Second change in the union		**1.01**	**1.03**	**0.50**	**0.26**

Table 6.5. (continued)

	Third interval: second birth to third birth				
	Italy	*France*	*Hungary*	*Sweden*	*USA*
Age					
<23	0	0	0	0	0
24-25	**-0.39**	**-0.63**	**-0.74**	**-0.26**	**-0.20**
26-28	**-0.71**	**-0.91**	**-0.73**	**-0.44**	**-0.44**
>28	**-0.72**	**-0.95**	**-1.15**	**-0.36**	**-0.68**
Cohort of birth					
Cohort 1952-1954 (1954 for Sweden)	0	0	0	0	0
Cohort 1955-1957 (1959 for Sweden)	0.13	-0.08	**-0.32**	**0.25**	0.11
Cohort 1958-1960 (1964 for Sweden)	-0.00	0.19	0.04	**0.33**	**0.17**
Cohort 1961-1963 (1969 for Sweden)	0.13	0.22	0.20	-0.06	**0.28**
Cohort 1964-1970					**0.37**
Number of unions					
One union		0	0	0	0
More than one union		-0.16	**0.59**	**0.50**	**-0.17**
Type of union					
Direct marriage	0	0	0	0	0
Indirect marriage		-0.03		0.08	-0.03
Cohabitation		0.19		-0.19	0.06
Other	**0.51**		**0.80**		**-0.27**
Change in the union					
No change		0	0	0	0
New union				**0.35**	**0.37**
Separation/divorce		-0.19	**0.42**	-0.01	-0.06

Notes: [1] Controlled for women education, employment, religious observance (not included for France) and urbanisation.

[2] All significant estimates at the p-value < 0.10 are in bold.

Source: Our elaboration of FFS data.

pattern of partnership behaviour. Most couples get married and have children. Cohabitants are usually of a different mindset, and they do not necessarily desire to get married even if a child does come along, although many end up doing so. France and the United States have moved further away from traditional family models: in this situation, couples quite often begin a union with cohabitation, but almost all of them prefer to get married if a child is planned or expected. On the other hand, Sweden is the country where the transformation of family behaviour patterns goes back furthest in time. Couples frequently start a union by cohabiting, and they do not necessarily transform cohabitation into marriage if a child comes along: it is a question of personal choice.

When the couple experience conflict, the existence of children is a strong disincentive to separation in the more traditional countries, such as Italy and Hungary. In France and the United States it is less of a deterrent, because self-interest prevails over family interest. In Sweden, perhaps unexpectedly and despite its 'modern' trends, the disincentive is stronger than in France and in the United States. This is because self-interest is subjugated in order to protect the children. This is formalised by Swedish social policies, which, compared to those of other countries, place much more emphasis on the well-being of children (Pinnelli, 2001).

J. CONCLUSIONS

The analyses which we have discussed above used a variety of different models in order to determine the influence of new patterns of partnership behaviour on fertility and vice versa. The hypotheses that we presented at the start of this chapter have generally been confirmed by the analyses.

The postponement of unions and delay in childbearing do not have the same

Table 6.6. Results[1] of hazard model analysis: effects of childbearing on transformation of cohabitation into marriage and on union dissolution

	Transformation of cohabitation into marriage				
	Italy	*France*	*Hungary*	*Sweden*	*USA*
Arrival of 1st child	**1.37**[2]	**2.05**	**1.73**	**1.13**	**1.98**
	First union dissolution				
	Italy	*France*	*Hungary*	*Sweden*	*USA*
Number of children (time varying)					
0 children.	0	0	0	0	0
1 child	**-1.68**	**-1.08**	**-1.46**	**-1.27**	**-0.92**
2 children.	**-3.24**	**-1.89**	**-2.76**	**-2.87**	**-1.98**
3 children.	**-4.47**	**-2.59**	**-3.33**	**-3.34**	**-2.54**

Notes: [1] Controlled for women's cohort, age, education, employment, urban or rural residence, religious observance (not included for France), also type of first union for first union dissolution.

[2] All significant estimates at the p-value < 0.10 are in bold.

Source: Our elaboration of FFS data.

consequences in all countries. In Italy, Hungary and the United States they have a negative effect on the quantum and tempo of the birth of the first child and subsequent children. However, in France the negative effect is limited to the second and third child and in Sweden only to the third child. Beginning later apparently means losing the opportunity or desire to reproduce in the first three countries, while it encourages the making up of lost time in the other two, but this catching-up effect is limited to the first, or at the very maximum to the second birth. We have already explained this result by linking it to the different meaning of union in the different countries. In those countries with more traditional family models – e.g. Italy and Hungary – children are seen as the natural consequence of a union. This is also seen to some degree in the United States, where half the unions are still direct marriages. However, in France and Sweden, the goal of the first union is not generally to have children straight away.

A long interval between the first and second child reduces the probability of going on to have a third, and delays its arrival, confirming the negative effect on fertility of any type of postponement.

Not being in a union at the moment of the birth of a child always has a negative effect on subsequent fertility.

Life table analysis clearly shows that cohabitation is frequently associated with childlessness and the postponement of childbearing. Mixture models and hazard models confirm this result very clearly as regards the first and second child, though the differences are less marked regarding the arrival of the third child. Non-marital unions which have already given life to two children, other circumstances being controlled, have markedly different characteristics from those without children.

Cohabitations which transform into marriage (indirect marriage) have higher fertility than ongoing non-marital unions: this is clearly shown from mixture and hazard models, which always show a positive effect of the transformation of cohabitation into marriage on the timing and intensity of childbearing. Moreover, the birth of a child always favours the transformation of cohabitation into marriage. This reinforces the view that in many cases cohabitation is a transitional condition, the transformation of which into marriage is commonly provoked or

accelerated by the plan to have a child. However, cohabitations which remain so after the birth of children concern people with markedly different attitudes, as Clarkberg *et al*. (1995) have demonstrated.

The instability of unions has a clear negative effect on fertility. However, the formation of a new union favours fertility. This can be seen clearly from the effect of time-varying variables: the passage from living together to marriage or starting a new union favours fertility at all intervals, while separation discourages it. This does not mean that women with more than one union have more children than women who have only been in one (the results of the life tables and mixture models concerning the second interval confirm this), but that the fact of beginning a new union, other circumstances being equal, places her in more favourable conditions for resuming her reproductive plan.

The effect of the arrival of a child on the transformation of unions from cohabitation to marriage is not uniform in the five countries studied. There are also country-to-country differences in the effect of the existence of children on the probability of separation. We have sought to provide an interpretation for this, observing the different level of traditionalism in family models and the different institutional support given to women and children in the five countries.

Comparing different cohorts demonstrates important trends: an increasing tendency to postpone births, becoming stronger as the birth order increases, and also, in some cases, a tendency not to have a first child. Once the first child has been born, the more recent cohorts tend to go on to have a second child, and also a third, more frequently than the older cohorts. This gives some support to the hypothesis of a trend towards the polarisation of the population into two sectors – family and non-family – as described by Hoffmann-Nowotny and Fux (2001).

The hypothesis that new forms of partnership behaviour only influence the timing and not the intensity of fertility is decidedly undermined by our results. The weakening of the norms upholding marriage is having significant negative effects on fertility: the alternative forms of union are more fragile than marriages, and they often take the form of temporary living arrangements which are either dissolved or transformed into marriage. Both informal unions and union instability favour the delay of procreation and lower fertility. In turn, childlessness and low fertility favour informal unions and the instability of unions. The tendency to opt for forms of union other than marriage (at least initially), and for unions to be unstable, is therefore mutually reinforced by the tendency for fertility to be low.

The strength of the relationship between new union patterns and low fertility behaviour is greatest where social and cultural transformations are most recent. In countries where these changes happened earlier and where women and children have higher institutional support, such as in the countries of Scandinavia, represented in this analysis by Sweden, the ‘modern’ patterns of behaviour are more compatible with fertility.

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ANNEX

1. Mixture models for the analysis of birth histories

Most event history models (such as discrete-time logit and log-rate, continuous parametric hazard rate, accelerated failure, etc.) implicitly assume that the event of interest would eventually occur to everyone. This assumption is true for death, but it is unrealistic for many other events, such as the birth of a child. Some other traditional event history models (such as Cox's proportional hazards model) are compatible with the possibility that the event of interest would not occur, but they have some difficulty in interpreting the results, because they do not distinguish between the probability of experiencing the event and the waiting time to the event (Farewell, 1982; Yamaguchi, 1992). Mixture models permit this distinction, allowing the simultaneous estimation of the separate effects of covariates on the probability and the timing of the event. For the analysis of birth histories this means the possibility of distinguishing the determinants of birth stopping from those of birth spacing (Yamaguchi and Ferguson, 1995). To do this, mixture models combine a logistic regression of the probability of occurrence of the event with a survival model for duration (given that the event occurs).

Various survival models have been proposed to estimate the (separate) effects of the explanatory variables on the timing of the event. Following McDonald and Rosina (1998), for our analysis we chose a logistic-geometric piecewise discrete-time model. We used a Bayesian approach based on Gibbs sampling (a Monte Carlo Markov Chain method) to estimate our model. The priors for the regression effect parameters were independent N(0,0.0001) distributions, where the second parameter of the normal distribution is the precision (i.e. the reciprocal of the variance). Estimation of the model was carried out using BUGS (Spiegelhalter et al., 1995). A burn-in of 1000 iterations was used and inference was based on a sample of 5,000 observations from the posterior distribution.

We consider as 'significant' (even though this term is not appropriate in the Bayesian approach) only the parameters with the posterior distribution not containing 0 between the 2.5 and 97.5 percentiles. In the tables we present the mean of the posterior distribution of the parameter estimates.

2. Hazards model with time dependent covariates

To model the effect of partnership history on reproductive behaviour in a very simplified manner, we applied, separately for each of the first three birth intervals, an extension of the widely used proportional hazards model, which takes into account changes in time of some explanatory variables (Cox and Oakes, 1984)

$$h(t;z, z'(t))=h0(t)*w(z, z'(t);ß, ß')$$

where h0(t) is the baseline hazard function left completely unspecified, z is the vector of the explanatory variables that does not change over time for any individuals and z'(t) is the vector of the time varying covariates. The parameterisation chosen of w(z, z'(t); ß, ß') is the log linear form

$$w(z, z'(t);ß, ß') = \exp(ßz + ß'z')$$

We immediately note that when z=0 and z'(t)=0, h(t;z, z'(t))=h0(t).

Following a causal approach (Blossfeld et al., 1995), time-dependent covariates have been chosen in order to represent any relevant change in time of the partnership status, that causes the unit under study to be exposed to another causal condition since the change occurred. These changes were included as a series of time dependent dummy variables. Number and definition of these covariates vary according to the country observed and birth order. In practice, only the first two changes in union condition proved to have some influence on the birth interval length.

As our time-dependent covariates only change their values at discrete points in time, in order to include them into hazard rates we used a method called 'episode splitting' (Blossfeld *et al., 1*989). Every time the covariate changes its value, the original episode is split into two parts. The first split has the value of the covariate before the change, the second after. The last split has the same ending time and the same exit status as the original episode. All other splits are regarded as right-censored.

Model estimation can then be done with these split episodes, if in the calculation of the partial likelihood the different starting and ending times of the splits are explicitly taken into account. This method proved to be very efficient and not at all time consuming.

Calculations and estimates were done with the computer program TDA ver.5.2 (Rohwer, 1994).

ENDNOTES

[i] We use the term 'direct marriages' to define those unions which started as marriage, i.e. not preceded by cohabitation. 'Indirect marriages' are unions which started as cohabitation and were followed by marriage.

[ii] Additional information on the way the data have been used and on the statistical methods employed can be found in the Annex, or, where appropriate, in the paragraphs presenting the results.

[iii] The exposure begins with the union's start for the first interval and with the birth of the first (second) child plus 8 months for the second (third) interval (we considered the minimum distance between two live births one month post-partum amenorrhoea plus seven months pregnancy) .

[iv] "Generally, a good estimate of the surviving fraction is obtained when ample data for the end of the normal risk period are available" when event history analysis mixture models are used (Yamaguchi, 1992). For this reason, more recent cohorts have been eliminated for the application of mixture models. In particular, for the progression to the second child, the most recent cohort considered is 1961-63 (1959 for Sweden), and for the progression to the third child the most recent cohort is 1958-60. Contrary to this, more recent cohorts are present in the Cox model application.

CHAPTER 7

NEW APPROACHES AND METHODOLOGICAL INNOVATIONS IN THE STUDY OF PARTNERSHIP AND FERTILITY BEHAVIOUR[i]

Daniel Courgeau[*]

A. INTRODUCTION

The aim of this chapter is to give a review of certain novel ideas concerning the study of partnership and fertility behaviour. This will not be an exhaustive review of the various developments that have occurred in demographic methodology during the last decade. Instead, it will focus on three main areas of methodological innovations and new approaches in demography.

First, partnership and fertility behaviour can be considered as part of an individual's general life course. A person's educational, employment and residential histories are no longer treated as dependent characteristics that influence partnership and fertility behaviour, but as interacting processes. The life course in one arena may influence the life course in another, and vice versa. As a result, partnership and fertility behaviour no longer occupies a central position in these studies, which instead extend over a very wide range of subjects. The new approaches developed to undertake such multi-state analyses have been responsible for important methodological innovations and have contributed to the emergence of a new paradigm in micro-demographic research.

Secondly, a macro-approach has been the impetus for the application of classical mathematical techniques to multi-state life tables, where different demographic events can be incorporated into life tables of increasing complexity. Partnership and fertility behaviour may be introduced alongside mortality and migration flows between observed areas, in a multi-regional model. However, the use of transition intensities restricts the analysis to linear models that produce cycles in age structures and regional populations which vanish as the system reaches the stable situation. Recent experimentation with more complex systems has led to the development of non-linear models capable of generating persistent oscillatory or erratic behaviour in certain areas of their parameter space. Here, then, is the basis for a shift in paradigm, with analysis of the predictable behaviour of linear models being replaced by investigation of the dynamics of non-linear models, which can display unpredictable equilibrium behaviour even when they are completely deterministic.

Thirdly, demographers have, in the past, usually undertaken analysis at a given level: either the individual level, as in the first of the fields described here; or at an aggregate level, as in the second. It has long been known, however, that results obtained using aggregate-level data can differ markedly from those obtained using individual-level data. The task then is to understand why such discrepancies occur and to find ways to overcome this problem. This begins by recognising that an individual's behaviour or process at the micro-level always occurs in a particular macro-level context. Each context presents a

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range of opportunities and restrictions for individual action that vary depending on the aggregate level at which it occurs. The analysis of complex structures can be used to identify the mechanisms responsible for these effects and to explain some of the discrepancies observed between individual and aggregate data. The analyst has the possibility of working simultaneously at different levels of aggregation, with the aim of explaining an individual's behaviour or of understanding the working of the system at an aggregate level.

In what follows we review the methodological innovations associated with these new perspectives. This paper is concerned mainly with developments in the 1990s, though discussion of the changes involved sometimes refers to earlier periods.

In order to illustrate in more detail such innovations, we will use examples taken from our own research as well as from other authors.

B. INTERACTING PROCESSES

Till present, most researchers considered partnership and fertility as separate, independent processes. Under the classic paradigm in demography, each of these single phenomena is analysed as independent of the other, and as occurring in sub-populations, each of which is required to remain homogeneous. The intention is to isolate a process and to study its properties in the absence of other processes, i.e. in a "pure state" (Henry, 1959). In the real world, however, isolation is never feasible. This paradigm is at the origin of numerous problems. It is so restrictive as regards the events that can be studied that it effectively precludes entire sectors of demography, such as analysis of competing events and of interaction between events (Courgeau and Lelièvre, 1996).

A new paradigm is required, by which a more complete analysis of human behaviour can be achieved. Investigation is focused not on homogeneous sub-populations but on a series of individual life courses involving a succession of different states. In contrast to the classical paradigm, the unit of analysis is no longer a single phenomenon but the individual's life history, considered as a complex stochastic process.

The new paradigm can be approached by the following postulate: throughout his or her life, an individual follows a complex trajectory, which, at any given point in time, is dependent on his life history to date, the information he has accumulated in the past and the conditions prevailing in the society of which he is a member. Using this life course paradigm (Courgeau and Lelièvre, 1996, Willekens, 1999), the successive events occurring during an individual's life history can be considered as a single behavioural process, without giving priority to partnership or fertility behaviour. This is the basis for multi-state event history analysis.

The technique of proportional hazards models, introduced by Cox (1972), provided the basis for many demographic applications of event history analysis in the early 1980s (Menken *et al*., 1981; Trussel and Hammerslough, 1983). However, most of the models developed at that time took the form of single-spell models (or else examined sequences of similar events, such as successive births) using very restrictive assumptions and leading to the separate analysis of fertility, migration, and so on. These models introduced the effect of different individual characteristics.

Although some models during the 1980s did consider the interaction between different processes (Aalen *et al*., 1980; Courgeau and Lelièvre, 1986: Courgeau, 1987), such an approach was used more intensively from the end of the 1980s (Keilman, 1993; Van Wissen and Dykstra, 1999; Lawless and Fong, 1999). The models employed correspond to two different approaches.

1. The causal model

The first way interdependent processes were introduced was to consider one of the processes as dependent. The occurrences of

the other processes were then treated as binary time-dependent covariates whose values become equal to one after their occurrence (Gill, 1992; Blossfeld and Rohwer, 1995). The assumption made was that the current rate of the dependent process depends on the past history of the other processes, and is taken into account up to the current interval.

This approach leads to different causal models, one for each studied process, depending on the occurrence of the others. The likelihood for all these processes can be factorised into a product of the likelihoods for the separate models. This is made possible by the fact that a change in one of these processes, at any specific point in time, *t*, may depend on the history of all the processes up to, but not including *t*. This assumption of conditional independence can be used in different models, which may introduce more complex groups, as will be seen later (Lelièvre *et al*., 1997). Let us show how this can be modelled.

Let us suppose, to take a simple example, that the main process has a failure time T_1 while the only other process has a failure time T_2, and that there are several time independent covariates given in a vector Z^i, for individual *i*. Under a proportional hazards model, this causal approach leads to the following formulation of the hazard rate for the occurrence of the first process at time *t*:

$$h_1^i(t \mid Z^i, u_2) = h_1(t)\, exp\,([1 - H_0(t-u_2)] * \beta_1 Z^i + H_0(t-u_2)[\beta_0 + \beta_2 Z^i]) \qquad [1]$$

where $H_0(t-u)$ is a Heaviside function, equal to 0 if $t \le u$, or 1 if $t > u$; where u_2 is the time of occurrence of the second process; and $\beta_0, \beta_1, \beta_2$ are parameters to be estimated. In this case, the baseline hazard will be multiplied by $exp(\beta_1 Z^i)$ if the second process has not yet occurred, and by $exp(\beta_0 + \beta_2 Z^i)$ when it has occurred. It can be seen that the influence of the second process on the first one will be to multiply the baseline hazard by a constant, and to change the multiplicative effect of the time independent covariates.

It is simultaneously possible to model the transition rate for the second process, with the first process being treated as a time-dependent covariate. From formula [1] we obtain a symmetrical formulation for such a transition rate.

This approach enables an easy generalisation of the Cox model and its related statistical procedures to multi-state models in demography, under the assumption of independent censoring (Gill, 1992).

Such a model can be further generalised to include a large number of time dependent covariates, corresponding to the occurrence of different processes, while each of these processes may be considered in a separate equation.

Finally, the inclusion of time-dependent dummy variables may serve as proxies for interaction processes that are hard to observe. For example, it is possible to study the rate of entry into marriage with a monthly pregnancy-birth process, which can be presumed to represent a theoretically underlying negotiation process between members of the observed non-marital couples (Blossfeld *et al*., 1999).

Such models can be analysed with a wide variety of software, such as SAS, TDA, STATA or S-Plus (Lelièvre and Bringé, 1998).

2. The interaction model

Instead of analysing one of the interdependent processes in terms of its dependence on the other processes, this model focuses on the system of interdependent processes as a whole. It involves defining a new joint state space, based on the various state spaces of the coupled processes, and then proceeding as in the case of a single dependent process. If we have *n* processes, then the system will

have 2^n different hazard rates to estimate. Some of these combinations may not be possible, of course, and must be excluded.

Let us consider the same example as in the previous section. We will now have four hazard rates to estimate (2^2) instead of two (Aalen *et al.*, 1980; Courgeau and Lelièvre, 1986, 1989, 1992; Hougaard, 1999a). For the first process we can define two kinds of rates based on whether the second process has or has not previously occurred. Let us call 0 the initial state for every individual who has not experienced any of the considered processes. The rate for the first process occurring to individual, *i*, who has not yet experienced the second process, may be written:

$$h_{01}^{i}(t \mid Z^{i}) = h_{01}(t)\, exp(\beta_1 Z^{i}) \qquad [2]$$

For individuals who have already experienced the second process at time u_2, the rate for the first process which has not occurred before this time, may be written:

$$h_{21}^{i}(t \mid Z^{i}, u_2) = h_{21}(t, u_2)\, exp(\beta_2 Z^{i}) \qquad [3]$$

where the baseline hazard may now be defined as a function of *t* and u_2.

This model is identical to the previous one only if we suppose that this function is independent from u_2 and proportional to the first baseline hazard. In this case we can write:

$$h_{21}(t, u_2) = h_{01}(t)\, exp(\beta_0) \qquad [4]$$

and this relationship leads to a synthetic formulation of formulae [2] and [3], which is formula [1].

In another situation we can suppose that this function may be written:

$$h_{21}(t, u_2) = h_{21}(t - u_2) \quad \text{for } t \geq u_2 \qquad [5]$$

which leads to a semi-Markov model, in which the baseline hazard depends not on age but on duration of stay in the second state (Courgeau, 1995a). Other situations may lead to more complex models, which are no longer Markovian (Hougaard, 1999a).

The two other hazard rates, for the second process occurring before or after the first one, are symmetrical to the previous rates [2] and [3].

Labelled boxes and arrows indicate the states and transitions for the whole model in Figure 7.1.

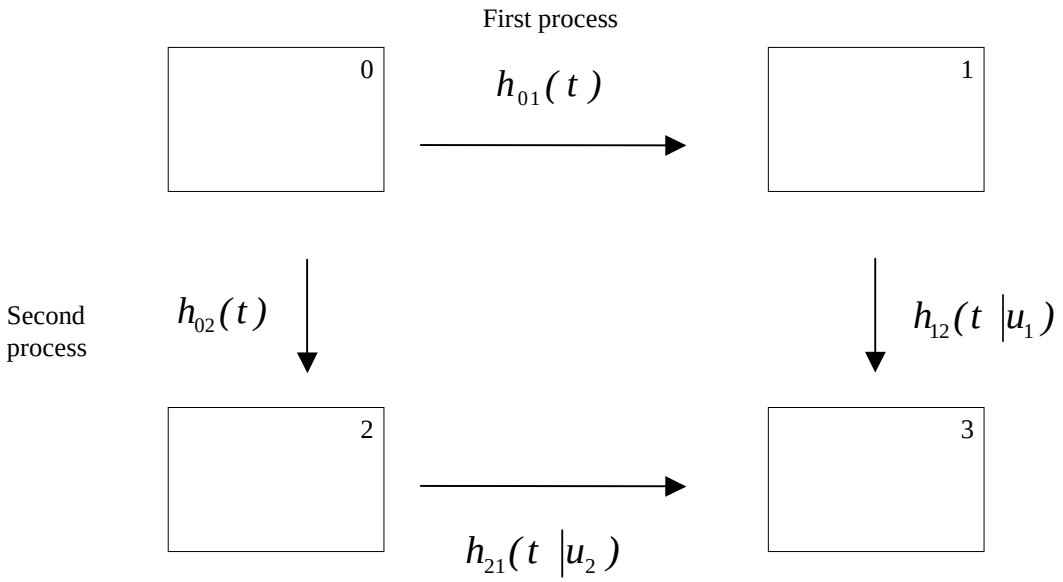
When there are no intervening covariates, and when the baseline hazards are independent of *u*, it is possible to distinguish various interesting forms of dependencies between the two studied processes. We can see how the previous occurrence of a phenomenon may influence the future probability of occurrence of another one. If this influence is one sided, then we can conclude for a unilateral or local dependence (Schweder, 1970) that one process will have an influence on the other, while the reverse is not verified. If this influence operates in both directions, then we can speak of reciprocal dependence. The final possible case, when there is total independence between the two events, is very rarely encountered.

As can easily be shown, this approach allows the introduction of different interacting processes. For it to be efficient, however, very large samples of individuals are needed so as to obtain large numbers of interacting events for analysis.

The methods for such analysis are not yet adequately developed and require further research (Andersen *et al.*, 1992).

This approach also permits the introduction of unobserved common or potentially correlated factors influencing both processes. In that case the likelihood can no longer be factored and the principle of conditional independence, necessary for the previous causal model estimation procedure, no longer holds. The estimation procedure presented here permits introducing such potentially correlated unobserved heterogeneity (Lillard, 1993).

Figure 7.1. - Study of interactions between two events: bivariate case



In this case, it is possible to introduce a set of individual-level scalar random effects for the transition, from state *k* to state *l*, V_{kl}^{i}, that are added into the exponent of the intensity function, as in:

$$h_{kl}^{i}(t|\ Z^{i}(t)) = h_{kl}(t)\,exp(\beta_{kl} Z^{i}(t) + V_{kl}^{i}) \quad [6]$$

These random variables are then presumed to represent selectivity and/or heterogeneity in the population by picking up effects of covariates that are not included in the intensity regression analysis, and that may be a source of correlation across equations.

For example, it is possible to capture the joint or simultaneous relationships between marriage dissolution and marital fertility (Lillard and Waite, 1993). In that case, we have two sets of equations for each woman: one for the hazard of dissolution of her *k*th marriage and the other for the hazard of the *l*th conception in each marriage, with two heterogeneity components that represent the effects of unmeasured latent risk factors which are not included in the model but which are a source of correlation across equations. The negative correlation found between the two heterogeneity components shows that those women who have the greatest propensity for childbearing also have the lowest propensity for divorce.

We will see later how this methodology may be related to a multilevel model.

3. Some other issues

Much of the discussion so far has been presented in terms of proportional hazard models, in which different characteristics affect an individual's rate in a multiplicative way. This hypothesis has to be verified by using a non-parametric approach, for example, and many techniques have been developed to examine how covariates should be measured and whether their effects are constant or not. When the Cox regression model is found to be inadequate to model the observed interactions between the processes, an alternative has to be used. Various models, such as an accelerated failure time model, have been proposed to get a better fit to the data.

Another important theoretical issue raised by use of the Cox model concerns unobserved heterogeneity caused by

omission of important covariates. In fact, when using a linear normal model, it can be shown that when the unknown covariates are independent of the known covariates, the regression parameters are unchanged. This is no longer the case with the Cox model. However, a technique has been developed to study how omitting certain characteristics affects the estimated parameters of the observed ones (Bretagnole and Huber-Carol, 1988). When the omitted characteristic is independent of the observed ones, this omission has no effect on the sign of the estimated parameters, but it does result in a reduction of their absolute values. This means that if the effect of a characteristic was significant when other independent ones were omitted, introducing them in the model will only reinforce the effect of the first characteristic. On the other hand, some characteristics that apparently had no significant effect may acquire a pronounced significance when characteristics initially unobserved are introduced. In contrast, when an accelerated failure time model is used, it can be shown that there is no change in the regression part of the model (Hougaard, 1999b).

Another problem arises when the sources of longitudinal data, such as the OPCS longitudinal study, the INSEE Demographic Panel Survey (EDP) or the geographic and wealth mobility survey in 19th and 20th century France, contain fragmentary demographic information (Courgeau and Najim, 1995). For example, the family history of individuals may be fully documented via vital registration data, while their migration or occupational history may be known only as regards to their place of residence or occupation at the time of a census or family event. In this case all we know is that a move has occurred between two censuses or family events. The usual methods of event history analysis are unable to handle such interval-censored data. If the assumptions are made that no more than one of the events studied (say, migration) can occur between two observation times, and that the events defining the individual's spatial or social position are independent of the geographical or occupational mobility we want to measure, a valid estimation of the probabilities of moving then exists, and proportional hazards models can be calculated. However, in order to estimate interaction between two processes (family formation and mobility, for example) one or both of the previous assumptions have to be discarded. Much work remains to be done in this field.

4. Atomic fallacy

A potential problem for event history analysis concerns the tendency to consider individual behaviour as being influenced only by individual characteristics. The danger here is of committing the atomic error, that is, of ignoring the context in which human behaviour occurs. In reality, of course, individual behaviour is influenced by context, and it seems fallacious to consider individuals in isolation from the constraints imposed by the society and milieu in which they live. We will see later how contextual and multilevel analysis can be used to solve this problem.

C. NON-LINEAR MODELS

Macro-level approaches in demography were until recently usually associated with the use of linear models. However, the hypotheses underlying such models are remote from real world conditions and recent efforts have been directed to developing more realistic models.

1. Multi-state non-linear tables

For more than 300 years, classical mathematical techniques have been used in demography to produce life tables. Important generalisations of these methods in the late-1960s and 1970s led to the development of non-hierarchical tables. With these it is possible to accommodate different forms of decrement from an initial state, chain together a series of tables, include re-entrants into states and differentiate interstate moves by both origin and destination (Land and Rogers, 1982).

Mathematical models can be built to describe transitions between the different states, leading to time-continuous Markov chain models. Such models consider an individual life course as the result of a stochastic process occurring in a given state space. This process is said to satisfy the Markov property if its future state depends solely on its present state; that is, if none of the states previously occupied have any effect on the present probability of moving to another state. However, the process is not stationary, as this probability may be dependent on the time at which the step is being made.

Such hypotheses lead to linear or quasi-linear models, which are the basis for population projections. For example multi-state projections using regional fertility rates, regional mortality rates and out-migration rates from each of these regional sub-populations, produce a stable regional distribution in the future.

However, such assumptions are very restrictive and are a crude approximation of many demographic processes. One way of analysing non-Markovian processes is to expand the state space so that the process in the new space is Markovian. But such an extension causes inflation in the data necessary for estimating large numbers of transition intensities, beyond the capacity of the usual data sets. In fact, for further advances to be made, it appears that non-linear models must be employed.

If it is accepted that a given behaviour is linked to the entire past life history of the individual, we can see that it is necessary to develop non-Markovian processes. For example, fertility behaviour may depend on feedback mechanisms of the kind proposed by Lee (1974). Contrary to linear stable population models, which produce cycles that vanish as the system reaches the stable situation, such non-linear models may generate persistent oscillating behaviours when these mechanisms are strong enough. Day *et al*. (1989) present an extensive non-linear model in which fertility and population size depend on such household characteristics as income, consumption, preference and cost of childrearing, and they derive conditions under which sustained cycles and chaotic behaviour emerge. Bonneuil (1990) uses a non-linear model that replicates Coale's I_f index for the Pays de Caux during the period 1589-1700, and shows that mortality conditions exhibit a bifurcation point for the fertility index. More recently, the link has been established between non-linear models and unpredictable behaviour of the studied processes (Bonneuil, 1994a).

In multi-state tables such non-linearities may arise for a variety of possible reasons. For example, the fertility behaviour of an individual who migrates may change according to the area of destination, but this change is not necessarily instantaneous and may be influenced by a memory of the norms of the previous places in which he has lived. Similarly, migration from high mortality areas, such as northern France or Brittany, to low mortality areas like Paris or southern France, will not free an individual from his past history, such as a period spent working in a coal mine, or past alcoholic behaviour. Mortality will be linked to his past history.

The classical model, as indicated earlier, used fertility, mortality and out-migration rates. However, such out-migration rates do not take into account the attractiveness of destination areas. A more realistic model would use a migration parameter between regions *k* and *l* in some time interval (t_0, t_1), defined as:

$$M_{kl} / (P_k(t_0).P_l(t_1))$$

Here M_{kl} is the number of migrants between areas *k* and *l* during the particular interval; $P_k(t_0)$ denotes the population of the region of origin at the beginning of the interval; and $P_l(t_1)$ the population of the region of destination at the end of the interval. The resulting model is non-linear and no longer leads to a stable regional distribution in the future: sustained cycles may appear, certain sub-populations may

disappear, and chaotic behaviour may even occur (Courgeau, 1995b). For chaotic behaviour to occur, however, the migration parameter may reach values that are unlikely to be encountered in usual populations.

For the analysis of partnership formation, interacting individuals replace the interacting regions used for migration. Two-dimensional marriage rates include in their denominator an expression of the time both spouses were exposed to the risk of partnership formation, or of the numbers of males and females not yet in partnership. This two-sex problem has also been examined using non-linear models with cycles (Chung, 1994).

Common to these approaches is a shift in paradigm away from an analysis of the predictable behaviour of linear models, to the investigation of the dynamics of non-linear models which may exhibit chaotic behaviour even when they are completely deterministic (Keilman, 1993). Such behaviour is unpredictable in the sense that very small variations in the initial values or in the parameters can produce sharply contrasting subsequent changes.

However, this shift to chaotic behaviour occurs only when some parameter values have surpassed so-called bifurcation points. It is questionable whether these bifurcation points can in fact be attained in actual populations. Blanchet (1997) has demonstrated the need for caution and shown the problematic character of attempts to build models that aim to establish the intrinsically chaotic nature of demographic dynamics. In addition, a careful balance must be struck over possible tendencies to invoke chaos whenever explanation and understanding fail. Chaos and stochastic processes may be considered as different approaches to analyse behaviour. The models that lead to chaotic behaviour, far from being stochastic, are entirely deterministic, being merely the latest attempts to reduce the apparent disorder of the real world to simpler macro-laws.

2. Viability Theory

Let us now try to observe what happens when a random component is introduced into such models. This can be done by means of viability theory, which is concerned with the evolution of non-linear macro systems in the absence of any determinism. Developed by Aubin (1990), this theory has received many applications in the fields of demography and economics (Bonneuil, 1997). Its basic premise is that a complex social organisation can be described by simple regularities, which have the capacity to generate durable social forms. Let us consider its main features in more detail.

First, the states of the studied system have to be defined in terms of the various characteristics that summarise its existence, such as fertility, income, household size, consumption and so forth. These characteristics are time dependent, but they must attain certain thresholds for the system to exist. Such conditions are thus at the origin of state constraints, such as an income threshold for an individual to live or a size threshold for a household to exist. To ensure its survival, the system can adopt a number of possible actions, such as a change in fertility or a change in consumption. These actions are called ‘controls’ and can be situated between certain values. A change in consumption, for example, is characterised by a degree of inertia and is limited to a closed interval.

Once these conditions have been defined, the evolution of the system can be formalised, with the derivatives of its characteristics over time being specified by known equations, such as those describing a predator-prey relationship. From among the whole set of initial states and trajectories, the viable ones can be identified. Viability depends on finding a trajectory departing from this state which will always stay within the constrained set of states. More interesting, however, is to transform this problem, which is a global one in the state space, into a local one at time t : from a given state occupied at this time, what are the possible choices which

will ensure the survival of the system? No attempt is made, therefore, to predict a determinist evolution of the system, merely to identify a set of possibilities with which the system can be maintained.

Contrary to the traditional emphasis on the study of asymptotic equilibrium in linear models, this new approach involves delineating the set of possible evolutions and actions that ensure the survival of the system at any time. It cannot provide a precise forecast of the future for a particular system, since no single trajectory is preferable to any other among the viable ones; but it does allow the selection of a set of attitudes which at any given time is able to keep the system in existence forever.

When studying temporal fluctuations in fertility, for example, the notion of demographic cycles can be replaced by viability theory. In order to maintain a particular standard of living, households have the possibility of modifying either their fertility or their lifestyle (Bonneuil, 1994b). When the viability constraints for the standard of living are reached, as happened during the Second World War, considerations of economic viability lead to a choice between reproduction and consumption and may result in sharp jumps in fertility.

3. Ecological fallacy

Multi-state linear or non-linear tables can be extended in order to identify the relations which exist between the rates corresponding to the phenomenon being studied in each sub-population, and the average values of different characteristics also calculated for each sub-population. An analysis of fertility rates in different regions, for example, would seek to link them perhaps to the out-migration rates or unemployment rates found in those regions. Such an analysis can be said to make possible an examination of the effect that the groups being studied have on their own demographic behaviour. In this case the aggregated characteristics are interpreted as being a set of constraints that each sub-population imposes on its members and which influences their behaviour.

An analysis conducted along these lines might, for example, reveal a positive association between the rate of unemployment in a region and its fertility rate. There is a real danger of concluding from this result that individuals who are unemployed have a higher fertility, whereas all that is in fact known is that a high rate of unemployment is accompanied by a high rate of fertility, regardless of whether the individual involved is economically active, unemployed or inactive. This mistake is an example of what is known as the ecological fallacy, which occurs when inferences about individual behaviour are based on aggregated measures.

D. ANALYSIS OF COMPLEX STRUCTURES

Although the conceptual origins of the analysis of complex structures can be traced back to the mid-1950s, it was only during the 1980s that efficient and practical computational strategies were developed. These often developed as theoretical elaborations of questions that had earlier been the subject of considerable debate in sociology (Lazarsfeld and Menzel, 1961), and produced statistical estimations used mainly in normal linear models.

As was noted earlier, the study of micro processes can lead to atomic error, while the study of macro processes can lead to ecological error. The best solution to these problems may thus be to incorporate both individual-level and ecological measures in the same analysis. This approach might include different measures of the same factor. For example, each subject would be characterised by his or her own exposure level as well as the average exposure level for all members of the group to which he or she belongs. The aim here is to explain a behaviour, which is still treated as individual, while working simultaneously on different levels of aggregation. The risk of ecological fallacy is thus eliminated, since the aggregated

characteristics are used to measure a construction that is different from its equivalent at the individual level. It is introduced not as a substitute but as a characteristic of the sub-population which will influence the behaviour of an individual member. Meanwhile the atomic fallacy is also avoided by the correct inclusion in the analysis of the context in which the individual lives.

1. Contextual and multilevel analysis

Various methods have been developed for including both individual-level and ecological measures in the same analysis.

The first method, often called contextual analysis, is a simple extension of conventional modelling techniques such as logistic regression or event history analysis. The model seeks to fit the data at the individual level and includes both individual and ecological predictors.

In such models, the characteristic to be analysed is always considered at the individual level: kin network size, in a linear/Poisson regression model; being married or not, in a logistic model; age at marriage, in an event history model. The explanatory characteristics can also be more diverse. The first step is to introduce individual characteristics. Next, characteristics for a given aggregation level are introduced. These might be the percentages or averages of individuals having these characteristics, such as percentages of married individuals in each area just before the occurrence of the studied event. More complex analytical procedures can also be employed. For example, in addition to average income, it is possible to introduce the correlation between income and matrimonial status.

Other characteristics are more global and concern the observed units in their entirety, as for example the number of hospital beds in an area. These do not correspond to any individual characteristic, but they can be aggregated at larger levels. Thus the number of hospital beds in a larger region is the sum of the number of beds in each area of the region. Finally, other collective characteristics are well defined for a given level of aggregation, but cannot be aggregated at larger levels. The political orientation of a commune, as defined by the party of affiliation of its mayor, for example, cannot be aggregated with those of the neighbouring communes, which may cover a broad spectrum.

Such a contextual model may consider the interaction between migration and marriage, for example, by means of a simple logit model (Baccaïni and Courgeau, 1996). Let us write the probability that the characteristic to be estimated, y^{ij}, for individual i living in area j is equal to one, is expressed in relation to the explanatory individual variable, x^{ij}, and the aggregated one, considered before the study, $x^{\cdot j}$, measuring the perception people have of their surroundings, by a logit model:

$$P(y^{ij}=1 \mid x^{ij}, x^{\cdot j}) = [1+exp(-[a_0 + a_1 x^{ij} + a_2 x^{\cdot j}])]^{-1} \quad [7]$$

Applied to young Norwegians, this appears to indicate that married men have a higher probability of migration away from their region of origin than unmarried men. However, when the percentage of married men increases in a region, the probability of migrating decreases for both married and unmarried men. Such a result highlights the dangers of inferring individual results from results obtained at a more aggregated level: the presence of a large number of young married men in a region results in a lower probability of migrating for all categories of the population. But this does not mean that married men have a lower probability of emigrating than unmarried men; the exact opposite is in fact observed.

A serious limitation of contextual analysis is that outcomes for individuals within regions are treated as independent. In practice, the outcome for an individual in a particular region often depends on the outcome for other individuals living in that region. Ignoring such within-region dependences generally results in estimated

variances of contextual effects that are biased downward, making confidence intervals too narrow. One response to this problem of within-region dependence is to introduce random effects into the contextual model.

This refinement results in multilevel models (Goldstein, 1995; Courgeau and Baccaïni, 1997), which are also called mixed-effects or hierarchical models. Reconsidering model [7], this approach can now be formalised in the following model:

$$P(y^{ij}=1 \mid x^{ij}, x^{\cdot j}) = p^{ij} =$$
$$[1+exp(-[a_0 + u_0^j + (a_1 + u_1^j)x^{ij} + a_2 x^{\cdot j}])]^{-1}$$

where u_0^j and u_1^j are random variables, of expectation zero. It follows that the answers y^{ij} are distributed according to a binomial distribution of parameter p^{ij}:

$$y^{ij} \approx B(p^{ij}, 1)$$

In this case we have the following conditional variance:

$$var\,(y^{ij} \mid p^{ij}) = p^{ij}(1 - p^{ij})\,.$$

The model then can be written as:

$$y^{ij} = p^{ij} + e^{ij} z^{ij}$$

where $z^{ij} = \sqrt{p^{ij}(1-p^{ij})}$ and where the variance of e^{ij} is equal to unity. This is level 1 variance, but we shall work essentially on the level 2 variances and covariances:

$$var(u_0^j) = \sigma_{u0}^2$$

$$var(u_1^j) = \sigma_{u1}^2$$

and $cov(u_0^j, u_1^j) = \sigma_{u01}$

Different estimation procedures have been proposed to estimate these parameters, their variances and covariances. Methods include those based on Bayes estimators (Wong and Mason, 1985), on non-linear model estimation (Goldstein, 1991), and on 'bootstrap' procedures (Laird and Louis, 1987). Such models can be analysed with software such as MlwiN (Rabash *et al*., 2000).

For the previous example, a multilevel model does not change the estimated parameters, which remain significant. The random effects, while not null, do not appear to be significant, thus inviting the conclusion that the aggregate characteristic explains the major differences between regions.

Rather than using individual characteristics and their aggregate counterparts, as in the previous example, it may be interesting to introduce structural and contextual characteristics that have no equivalent at the individual level. A good example of this approach is found in the study of interethnic marriages of Moroccan men in Belgium (Lievens, 1998) where district-level variables were introduced. A logit model was again employed, in this case to explain the probability of being married to a western European partner versus a partner of the same ethnic group.

An individual level analysis is first undertaken with the primary purpose of explaining the probability of an interethnic marriage using individual characteristics. The basic hypothesis is that the minority group members who are more assimilated to the dominant culture (longer periods of stay, higher levels of education, etc.) have a higher probability of being married to a partner from the majority group. This hypothesis is well verified in the present case. The introduction of a district-level variation does not modify the effect of individual level characteristics but reveals a very large variance between districts. Thus for the highest residual, the odds of being married to a western European are 3.17 times larger than the overall probability, while for the lowest one they are 2.16 times lower.

District-level variables, such as ethnic or socio-economic heterogeneity, the degree to which positions on different dimensions are correlated ('consolidation'), etc., are then introduced to see if they have an impact or even outweigh the individual effects. From this it emerges that, although these characteristics do play an important role in inter-ethnic marriages, they do not modify the existing effects of individual characteristics. Their introduction explains almost all of the district-level variance, which ceases to be significant, as in the previous example.

The conclusion from this example is that the two different theoretical approaches – individual versus macro-structural – can indeed be combined in a multilevel approach, yielding valuable additional insights and illustrating the interplay between these two analytical viewpoints.

2. Towards a multilevel event history analysis

Multilevel analysis has so far involved introducing space or social space into the study of a static characteristic by means of regression or logit models. The next step is to introduce time into the analysis, thus making possible a multilevel event history analysis.

Individuals are observed throughout their life. They may move from one area to another, in which different behavioural patterns are observed, and some of their characteristics may change at given times (they marry, change occupation, etc.). Equally, the characteristics of the regions in which they live can be expected to change over time (increase in the percentage of married people, increase or decrease of regional unemployment, etc.).

Obtaining information on all these changes calls for a new kind of sample survey that would introduce characteristics measured at different aggregation levels and allow the links between individual behaviour and social structures to be identified. The aim should be to "set up systems of observation that are representative of diversified and hierarchical social contexts, by combining in a system of integrated multilevel indicators the contributions of ecological analysis, individual sociological surveys and contextual analysis" (Loriaux, 1989). Although the WFS encouraged collection and analysis of community data (Casterline, 1987), the data are generally collected at the time of the survey, whereas what is needed is a continuous record. More recently, the carrying out of repeated Demographic and Health Surveys in a number of African countries using the same sampling unit, is an encouraging development, even if the contextual characteristics collected are of limited interest for fertility studies (Schoumaker, 1999). One possible solution to this problem is to use data from different sources but measured in the same area so as to observe individuals and the areas where they live over time.

On the other hand, analytical techniques already exist for calculating a partial likelihood, which is the ratio of the hazard of the individual experiencing the event at a given time, to the sum of the hazard rates of the remaining population exposed to the risk. The product of these likelihoods, calculated for each time an event occurs, can be maximised by introducing several aggregation levels (Goldstein, 1995). It is possible to go further and to introduce interrelated outcomes represented by the waiting times to the occurrence of the events for different processes.

Let us see in more detail how to handle such an analysis if we refer to the previous Lillard approach (see model [6]). Suppose that individuals are organised into groups and that individual *i* in group *j* has transition intensities, from state *k* to state *l* of the form:

$$h_{kl}^{ij}(t) = h_{kl}(t)\, exp[(\beta_{kl} + U_{kl}^{j}) Z^{ij}(t) + V_{kl}^{ij} + W_{kl}^{j}]$$

Observed dependencies may be picked up through the specification of

$Z^{ij}(.)$ by a coefficient β_{kl}, with a possible random component U_{kl}^{j} for group *j*. In order to model unobserved dependences between individuals, we can then introduce a set of individual specific random variables V_{kl}^{ij} and a set of group specific random variables W_{kl}^{j}. Some of these models can be analysed with software such as aML (Lillard and Panis, 2000). There is much interest in how one can identify sensible distributions for the heterogeneity variables V_{kl}^{ij} and W_{kl}^{j} (Horowitz, 1999). However, these results have yet to be generalised to more complex multi-state models, introducing individual or aggregate characteristics at multiple aggregation levels, with different kinds of baseline hazard functions.

Also, at a given aggregation level an individual may move to another area during his stay in the population submitted to the risk. This can be shown by considering the study of fertility in different regions of a country. It is clear that some individuals can be expected to change residence between these regions during their reproductive life. They must therefore be linked to a new region each time they move, and the effect of the contextual characteristics of these regions will influence their fertility behaviour. A Markov hypothesis can be made that the behaviour of an individual depends only on the region in which he is at present and that when he arrives in a new region he immediately forgets the constraints of the regions previously inhabited. Yet this hypothesis is scarcely plausible. The conditions need to be made less rigid. A solution is to test the speed of adaptation to conditions in the new region, if this is what is observed, or the conditions of selection of migrants in the region of origin, if the second hypothesis is confirmed (Courgeau, 1987).

In this way we are led to non-Markov models of demographic behaviour, whose complexity has to be added to the consideration of multiple aggregation levels.

The social structure of some of the groups under examination also needs to be considered. This has been shown to be necessary in the case of small groups, such as the family or the household. A full treatment of their social structure may require taking into account the interactions which occur between the members of the group and the changes over time in their interactions (Lelièvre *et al*., 1997). The hypothesis of conditional independence may also be adopted for these models, thereby allowing models of 'shocks' to be incorporated into the analysis of behaviour changes induced by events occurring to other members of the group.

E. CONCLUDING REMARKS

The preceding account has focused on the three main areas in which major innovations in demographic methodology have taken place: multi-state event history models, non-linear macro system theories and multi-level models. Developments have, of course, also occurred in other fields, which we will mention briefly here.

Methods originating elsewhere in the social sciences, and applied in substantially unmodified form, have yielded a number of new advances in demography. A case in point is the application of statistical methods originally developed for the analysis of textual data to the study of itineraries and event histories: these amount to a 'corruption' of textual statistics in that the words which are analysed are artificial. These methods are suited to the analysis of complex trajectories that are difficult to formalise with event history techniques (Courgeau and Guerin-Pace, 1998). Another example concerns the procedures developed in geostatistics under the name of "*universal kriging*", which have been used for the analysis of the spatial diffusion of demographic phenomena (Bocquet-Appel and Jakobi, 1997).

Although some innovations in the field of household dynamics have been touched upon, particularly in the discussion of multilevel models, we have ignored

other, more general models of household formation and dissolution. In our opinion this field was characterised by little progress in the 1990s and is in need of an entirely new theoretical approach (Murphy, 1996). In a similar fashion, the problems raised by micro-simulation models lie not in the implementation of the simulation itself, but in the theoretical bases underlying these models.

We did not develop in this paper the use of behavioural genetics in order to explain fertility, as proposed by Hobcraft and Coleman in Chapters 9 and 10 of this volume. Even if there are some new attempts to use these arguments (Kohler *et al*., 1999; Morgan and King, 2001), this approach is an old one: Fisher (1918) tried to show that biometrical traits might be studied by genetical methods. However, it was shown later that attempting to separate the effects of gene and environment leads to many unsolved problems (Capron and Vetta in Morgan and King, 2001). In consequence there is a need to be very cautious before drawing conclusions from such an approach.

Last but not least, we have quite deliberately excluded from this discussion the study of fertility transition and its relationship with mortality and mobility transitions in a long-term perspective. The changes in this field were significantly fewer in terms of new methodological developments than for combining perspectives and contributions from the other social sciences (Friedlander *et al*., 1999; Burch, 1999). These included inputs from economics, with the 'new home economics'; human geography, with the 'innovation-diffusion approach'; sociology, with the 'adaptation approach'; ecology, with 'evolutionary theory'; psychology, with 'decision theory'; and so on.

These new approaches and methodological innovations need to be examined in the more general context of the interrelationship between the social sciences and their epistemological bases, as a prelude to the elaboration of new conceptual frameworks for explanation.

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CHAPTER 8

FFS AND THE INTERNATIONAL DATABASE: PRECAUTIONS FOR USE

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A. OVERVIEW

The Fertility and Family Survey (FFS) project was a multinational, Europe-centred, comparative venture, launched at the very end of its world-wide predecessor, the World Fertility Survey (WFS), to collect and analyse new data on fertility and family. The aim was to set family building against a broader individual canvas by linking up different facets of personal biographies and attitudinal elements.

The FFS gives a wide coverage of the UNECE region. The 24 countries in the project also include parts of the former USSR (Baltic countries) and overseas countries (Canada, New Zealand, United States), but omit some populous countries like Great Britain, Romania, Russia, Turkey and Ukraine. The fieldwork was conducted between 1988 (Norway) and 1999 (Greece). Co-ordination was ex ante. Two key tools – the sampling frame and questionnaire – remained indicative and left countries ample scope for national adaptation; but the design of a Standard Recode File, to be provided by every participating country, has produced a truly comparative database. Comparative analysis was not confined to a predetermined, closed group of researchers, but was carried out by authors of the Standard Country Reports and a larger group of analysts who, on request, received information available in the international data base. At the time of the FFS Flagship Conference, two years after the completion of field work in Greece, 23 country reports had been (or were soon to be) published and 93 comparative research projects had been approved, although the volume of publications was much more limited.

1. Implicit and explicit objectives for the FFS

It was decided at the outset to give the survey a family rather than fertility focus, and to put family building in a life-course perspective through the collection and simultaneous analysis of retrospective biographies. In previous surveys of this nature, women – and frequently only married women of childbearing age – were the sole universe sampled. These constraints were lifted in the FFS. The gender approach resulted in the widely endorsed aim to have two discrete male and female samples, although men were under-sampled in most cases. It was also decided not to have both partners in couples interviewed, unless countries positively wished to do so. These sub-samples aside, all marital statuses were put on an equal footing in all countries, without differentiated probabilities or even stratification on this characteristic.

The second major focus of the FFS was to put family building in a multi-dimensional biographical perspective, to unveil the interactions between the educational, occupational, residential and familial facets of individuals' lives. Attitudinal items were added as another element; considered as subsidiary, however, most of them were relegated to the optional modules of the model questionnaire. This postulated consistency between various aspects of personal

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histories inevitably pointed to a longitudinal vision and to the grouping of members of the same cohorts for statistical analysis.

The biographical approach leads to an interpretation of individual behaviour by individual determinants. It is much more micro- than macro-focussed. Most global information on environment or economic circumstances is outside the compass of this type of data collection. This observation led Italian researchers, for example, to import from other sources information on each interviewee's place of residence (physical, geographical, political or demographic characteristics, service availability, etc.) for a macro-micro multi-level analysis (De Rose, 1996).

Falling between the micro- and macro-approaches, meso-analysis situates individuals in relationship with their different proximate or remote partners and studies the interactions of these actors. Not only are the facets of a personal biography interlinked, but each biography is also connected to other people's biographies. Individuals' decisions are affected by the behaviour of their spouses, children, parents, siblings, relatives, friends, neighbours, etc. The FFS did not broach this field. Only minimum information was collected about families of origin, partners and children; nothing was asked about siblings, colleagues, neighbours, etc. The FFS was built on an assumption of individualistic rationality, more in line with the idea of free choice in one's life than with that of constraining social pressure.

In fact, the FFS objectives in each country were more composite than has just been indicated. In most cases, the cost of a large-scale survey cannot be justified by the sole desire for a clearer understanding of the fertility and family behaviour of recent birth cohorts. Basic knowledge about the population can only be gained through surveys tackling such questions as: how many people currently live in non-marital cohabiting unions, or in non-marital, non-cohabiting relationships? How many are protected against undesired fertility by effective contraception? Questions on the current situation of respondents were included in the FFS but these looked rather sparse compared to the detailed biographies of individuals on the same topics.

The general position of the various countries vis-à-vis the FFS programme was very different. Countries can probably be divided into three categories:

- The first category was countries that adhered strictly to the programme and adopted its orientation and tools, either completely or with minor alterations. Typically, these were countries with little or no previous experience of fertility and family surveys, and so took over the model questionnaire with minimal adaptations. For these countries, creating a Standard Recode File was a straightforward task;
- The second category was countries that adhered to the principles of the programme – in particular the idea that comparative data should be produced through common tools – but had competing national objectives, often stemming from a tradition of past surveys in the same field. Continuity with previous experience challenged comparability with other countries. Steps were taken in various directions to make both objectives compatible; they included borrowing and adapting parts of the model questionnaire and carefully designing the Standard Recode File;
- The third group comprised countries which departed considerably from the FFS standard and so had to make tremendous efforts to join the mainstream. These included countries which had pioneered the FFS programme and had "jumped in at the deep end" before the tools were framed (generally, to contribute to their design); it also included others which were accommodated in the programme only after their survey was taken. For many of these countries, comparability is a vexed issue and development of the standard file caused some headaches.

2. Achievements and reservations

The most remarkable achievement of the FFS project is probably to have collected, through specifically designed surveys in 24 industrial countries, a full, unique set of interlinked fertility and family-oriented retrospective biographies of adult men and women. That aim predates and stems from outside the FFS, and is to be found, for instance, in the pioneering work of Robert Cliquet of the Population and Family Study Centre (CBGS) or Daniel Courgeau and Henri Leridon of the Institut National d'Etudes Démographiques (INED) in the 1980s. But, to the FFS goes the credit of having followed up this promising direction so quickly, and extending its coverage to a wide range of countries from east to west across Europe, and to some English-speaking countries outside Europe.

The exercise was constrained by the impossibility of imposing on so many countries an international comparative design which they would accept as a standard. In most countries, many national specific objectives were in competition with supranational orientations. Most often, this was for historical reasons, with the need to maintain a degree of continuity with previous investigations. Such a duality of objectives, it must be stressed, is almost inevitable in the UNECE countries, where there is a long-standing tradition of national data collection, and where the adoption of an internationally shared tool cannot be imposed and must be negotiated. The heterogeneity of the region in this respect only adds to the difficulty of the task for any co-ordinating body.

The rest of this chapter will be given over to an evaluation of the FFS programme's efforts to enforce a degree of homogeneity in the material collected and analysed, and to design specific tools that would create the conditions for comparability *ex post* whenever they could not be established *ex ante*. The emphasis will be on obstacles to comparability and the critical approach all researchers must take to the data they use. These particular reservations should also be considered as a tribute to the painstaking and productive efforts made by the FFS programme to construct a vast and abundant comparative database from the contributions of the participating countries.

B. COMPARABILITY OF SURVEY AND SAMPLE DESIGNS

Survey-taking in the 24 countries was spread over a 12-year period from 1988 to 1999. Latecomers – say, those that joined the programme after 1995 – benefited from the experience of the other countries and the PAU staff, and as a result tended to stick more closely to the standard questionnaire. By contrast, the pioneers who started their surveys in the late 1980s or early 1990s operated with relatively few guidelines. This was especially true of those countries that had planned their survey well before the main standardised instruments took final shape. In 1988, for instance, Norway chose a single-birth-cohort sample frame which was then later adopted by Sweden; in 1991, Poland decided to survey all the eligible members of each selected household, a procedure partly taken up by the Netherlands shortly after; also in 1991, Belgium used a questionnaire which departed even further from the standard model than that of Poland and the Netherlands. All these points raise clear comparability issues which will be addressed in the following paragraphs in relation to sampling and the questionnaire.

1. Sampling design

The very few guidelines set for a standardised sampling procedure were the product of general sampling theory and previous experience in the field. The theory reminds us that a random sample extracted from a base produces unbiased estimates for any characteristic of the target population sampled, although with some uncertainty, "sampling errors", which are essentially linked to the size of the sample. Stratification, multi-stage sampling, unequal probabilities or clusters are just practical devices that may affect the degree of uncertainty, but not the repre-sentativeness of the sample. The use of

these devices is also broadly considered to be justified by the constraints on access to good sampling bases. Many technical aspects of the sampling, albeit highly discrepant in the FFS surveys, were probably not significant for the comparability of the data collected. Nevertheless, some happened to have an impact on more fundamental issues like sample size and, even more so, response rates.

a. Sampling techniques

The main divergence was the type of sampling base that was used. In a handful of countries, lists of individuals were readily available from some nominal roll or other, so that the targeted respondent was determined *a priori* and was to be found in the field "come what may". Such was the case in countries with population registers – like the Nordic countries, Belgium and Hungary – or other types of lists: censuses (Estonia) or electoral registers (Italy). For these countries, the knowledge of certain individual characteristics relevant to the sample made interesting stratification possible. In Norway and Sweden, for instance, the sample referred to specific single year birth cohorts, so as to maximise population homogeneity on this point. In Estonia, age and native/immigrant status information could provide data on pre-survey out-migration and response rates. The use of nominal rolls as a sampling base was not just efficient, but also afforded a straightforward calculation of non-response rates (see below).

In the other countries, households had first to be selected on a geographical basis, and the interviewers had to choose the person(s) to be interviewed. This produced an "ecological" stratification: regions, sizes and possibly socio-economic characteristics of the settlement. Typically, random route procedures were used for the selection of households and a Kish number or some other random method determined the person to be surveyed in the household, but there were many variants around that general scheme. Defining the master sample probably meant knowing some characteristics of the household likely to be found at the selected address and could have allowed some stratification to be used. In specific cases like Canada or Switzerland, some telephone screening was performed after a randomly generated list of telephone numbers was prepared, so as to determine the eligibility in the contacted households. Another type of screening was used in France, where the FFS sample was extracted from a larger scale survey, and enabled some stratification of family-type characteristics. Decisions on eligibility in the household were quite inconsistent: only one person was interviewed in most countries, but all the adults in Poland and up to three in the Netherlands. The common feature in all these methods was that households were first contacted, then individuals in the household if they happened to be eligible. Amongst its other consequences, this two-stage procedure made the calculation of response rates less straightforward than in the case of nominal samples (see below).

b. Sample size

Sample size remains the basic element for assessing the expected precision of the survey results. But it is not that straightforward a criterion. No analysis could refer to the total sample, without at least some simple breakdown. What comparison could be made from a direct cross-checking of the total samples of two countries?

Large samples numbering more than 7,500 interviewees were taken in Estonia, Germany, the Netherlands, Poland, Portugal, Canada and the US. The latter two are somewhat atypical cases in that the surveys were not purpose-designed for the FFS but were standalone operations with a broader aim, from which FFS-type information was extracted. Small sample sizes of under 5,000 respondents were taken in Bulgaria, the Czech Republic, Greece, Latvia, New Zealand, Slovenia and Sweden. Bulgaria and New Zealand are special cases since, although purpose-designed for the FFS, the surveys were restricted to women; even then, the female

samples were relatively small compared to those of most other countries, and seem smaller still when the age coverage is taken into account. From the latter point of view, the Norwegian and Swedish samples were also cases apart, due to their partial coverage by using every fifth birth cohort.

There was a marked gender imbalance in the different countries' samples. In only three cases – the Netherlands, Poland and Canada – were men almost as numerous as women. At the other extreme, the male samples were no more than 50 per cent of the female samples in Italy, Portugal, Spain, Finland, Norway and Austria. In Bulgaria, New Zealand and the US, there was no male counterpart to the female participation.

The effect of sample sizes must be discussed in relation to the general objective of the FFS: a biographical analysis of birth cohorts. The consensus was that these cohorts should be five-year ones and the standard country tables were designed on this basis. The average size of the sex-specific cohorts, whether five-year or every fifth single-year ones, gives a fair idea of the uncertainties associated with the sampling procedure.

In the female samples, the average number of respondents per cohort was over 800 in Belgium, Finland, Italy, the Netherlands, Portugal and the US. Such numbers result in a 1.8 per cent maximum uncertainty on a 0.5 frequency. In the Czech Republic, Latvia, Lithuania, Slovenia, Greece and New Zealand, the average number was below 500, with at least 2.3 per cent uncertainty on a 0.5 frequency. Germany was a novel case in that the East and West German samples were analysed separately: however, because a relatively small band of cohorts were sampled, the average number of respondents per cohort of each sub-sample was not unduly low, being about 750. Taking all the FFS female samples, the lowest and highest values – 1.2 per cent in the US and 3 per cent in the Czech Republic – are fairly close to one another and indicate a highly acceptable degree of accuracy.

In the male samples, the situation was clearly less favourable. In the best case, the average cohort size was just under 800 in the Netherlands and Norway, but barely over 200 in Austria, Italy or Latvia and even below that in the Czech Republic and Greece. Uncertainties are less than 2 per cent in the first group of countries but around 4 per cent in the second. The three Nordic countries compensated for relatively small male sample sizes by a more selective coverage of cohorts for men than women; this resulted in a limited gender differential in cohort-specific sample size. In Italy, there was a maximum gender disparity in the cohort sizes.

c. Response rates

The main threat to randomness lies in non-responses and their selectivity. Non-respondents should always be suspected to be different from respondents and their high frequency may seriously bias estimates inferred from the available answers. Procedures generally used to address this problematic issue are firstly, to substitute new respondents during the fieldwork to compensate for non-respondents, and secondly, to perform post-stratification weighting during the statistical process to make the final sample concordant with that initially expected. However, whatever ingenuity is put into these methods, they can never match up to a good response rate.

Published information on non-responses is scarce or non-existent in the Standard Country Reports. The distinction between basic concepts like non-eligibility (when applicable), no contact and refusal was rarely made. Complexity of sample design was a major obstacle to information about non-responses.

Where up-to-date nominal rolls were used, the causes for non-response were almost exclusively limited to long-term absence and refusals. Outdated lists

may have added other causes, such as death or emigration. Such was the case with Italy, which relied on local electoral registers; this produced a high frequency of non-responses (over 40 per cent), but reasonable rates of refusal (about 16 per cent). In all other cases, refusals accounted for at least half of the non-responses. Non-response rates were very low in the Czech Republic (under 7 per cent), around 20 per cent in the Nordic countries, Estonia and Hungary (with refusals in the 7-15 per cent bracket), rising to approximately 30 per cent in Belgium (around 20 per cent refusals). Assuming that refusals are the worst impairments to representativeness, the range of rates from 7 per cent to 20 per cent can be considered as an acceptable sign of quality and homogeneity in the FFS data.

With non-nominal samples, randomly chosen households must be contacted, and the eligibility, presence and acceptance of their members checked simultaneously. Few countries provided the details needed to check the way (non-) response rates were calculated. Greece is a case in point, where 40,870 households were sampled, of which 19,482 were contacted and 21,388 were not; 58.4 per cent of the contacted households proved to be eligible; response rate = 4,074 completed interviews / 40,870 * 0.584 = 17.1 per cent. In Switzerland, contacts with households were made by telephone; "neutral losses" from this first stage were eliminated; they (correctly) included all cases of ineligibility, along with households that could not be contacted (which is highly problematic as some might have proved to be eligible); the resulting response rate, 37 per cent, is probably overestimated. In the Netherlands, the addresses were visited by interviewers; households not contacted were eliminated; these included cases of ineligibility (not a dwelling unit), as well as refusals (no time) and unavailability (illness); from the remaining households, those with no eligible persons were eliminated; the resulting response rate, 48 per cent, is probably overestimated. (In the Netherlands, several persons could be eligible in each household. Response rates were calculated "at household level", i.e. when at least one person responded. Such a procedure inevitably overestimates response rates at individual level.). Similarly, in New Zealand, the number of completed questionnaires was related to the number of persons listed as eligible in all households contacted (54 per cent); "a more refined measure would also [have taken into account] an estimate of the eligible respondents from those households which could not be contacted" (Marsault *et al.*, 1997); the published response rate overestimates the "more refined" one. In France, the households were visited for a first survey (Labour Force Survey); from the households who responded, individuals were identified as eligible for the FFS; published response rates (82 per cent) were limited to the second stage; they certainly overestimate the global response rate.

Most of the non-response rates were reasonably low, i.e. below say 25 per cent. We have looked more closely at the higher rates and checked their calculation, but consider that non-responses were, as just suggested, more probably under- than over-estimated, except for Greece. The authors of the national reports were mindful of the problems created by frequent non-responses and employed various checks to gauge the reliability of their data; they will be referred to below. But they also stressed the difficulty of doing better in their country: For instance, the Standard Country Report for the Netherlands states: "[t]he response [rate] is in line with other recent S[tatistics] N[etherlands] household surveys. In general, in the Netherlands, public willingness to participate in surveys is lower than in most other countries". Similarly, for New Zealand: "It should also be noted that lower than desired first-passage response rates are not just a New Zealand phenomenon, but are a major problem in developed countries, particularly when the agency carrying out the survey has no official status" (Marsault et al., 1997).

Except for countries with the highest response rates, like Poland, Estonia and Finland (women) where the survey

results were taken at face value, it was generally considered necessary to make adjustments to correct for the effect of non-responses on data representativeness. The most usual method was post-stratification: the distribution of respondents by selected characteristics was adjusted to a reliable distribution through re-weighting. The implicit basic assumptions were not very different from those in the quota method: a deliberate adjustment on selected key variables should result in a global adjustment for all variables. While the initial stratification had mostly been based on geographical aspects like regions or settlement sizes, post-stratification also introduced various demographic aspects like age at survey (or year of birth), marital status or household characteristics.

Instead of increasing the weight of the respondents to allow for non-respondents, some countries instead chose to substitute for the latter by introducing new people in the samples. However "natural" it may seem, this method is not much favoured by sample theoreticians unless strictly controlled. All respondents, whether initial or substituted, must have a clearly defined probability of participating in the final sample. The substitution methods used in the FFS varied quite widely. In some cases, their use was restricted to non-contacts, so excluding refusals (Hungary and Portugal), while in others they included all categories of non-responses. In some countries substitution restored the sample to its initially expected frequency distribution (e.g. Italy, where the substitute had to have the same age-sex-marital status as the replaced person), while in others it maintained distortions (e.g. Belgium, where random replacement by age and civil status did not systematically compensate for these two variables). More generally, the description of the substitution procedure in the Standard Country Reports is rather vague, which makes it difficult to come to firm conclusions about its statistical relevance.

2. A brief evaluation of survey and sample designs

The FFS surveys used a wide variety of sampling procedures and techniques to select their respondents. This was the result of unequal opportunities and constraints on statisticians at national level. It was also due to traditions that differ across the scientific community. But such differences can be considered as irrelevant as long as the basic requirement of randomness is satisfied.

From this point of view, the compilation of 24 random samples with an average size of over 5,000 is a great achievement and offers scope for a vast number of possible analyses. In particular, the ability to maintain a distinction between men and women and a five-year birth cohort approach in most international comparisons is a major contribution to an accurate description of family trends since the 1960s.

The only issue is with non-response rates. These were high in some countries, with values above 30 per cent. Tackling procedures used often some form of substitution, which is not always the best guarantee of reliability. Re-weighting relied on classical references to recent demographic or geographical distributions, with little attention paid to the emphasis put by the FFS on retrospective data. These reservations may be relevant for certain inter-country comparisons.

C. COMPARABILITY OF QUESTIONNAIRES

In 1992, the PAU published the final version of the model questionnaire, which was taken as a yardstick by all the countries participating in the FFS and formed the basis for designing the Standard Recode File later. The questionnaire reflected the basic orientation of the project, with a strong focus on both familial and non-familial biographies, a section on attitudes,

and a mix of core and optional modules. Some countries adopted the model in its entirety, while others developed their own guidelines and forged looser linkages with the FFS tool; halfway between these two extremes lay countries which took up part of the model and developed other aspects of their own.

There were model male and model female questionnaires which differed only marginally. Countries either adopted both or departed from both by drawing up their own versions of male and female questionnaires. The analysis below refers to female questionnaires.

1. The model questionnaire

The questions can be split into three categories; the first two (factual questions and biographies) were intertwined throughout the questionnaire, while the third (opinions and attitudes) was mostly concentrated in a single optional module.

Factual questions collected information on the current situation of the respondent or other members of the household. A first series of questions described the household through a brief characterisation of each member: marital status, activity, relationship with the interviewee, etc. A second series referred to the present fertility or fecundity status of the interviewed woman: current pregnancy, any sterility problem and current contraceptive practice. A third series dealt with the current situation of her present spouse or partner (if any).

Biographies were mostly collected in tables. They dealt with migrations (in an optional module), partnerships, live-born and adopted children, step- and foster-children, other pregnancies, fertility control (in another optional module), education and occupations. Questions on the age of the interviewee at her parents' separation and at her leaving the parental home were other biography-type questions. The dividing line between biographies and factual questions was sometimes blurred.

Opinions and attitudes were grouped into one (optional) module, except for questions on how "planned" ever-born children were and intentions concerning future and total fertility. More typically, there were questions on attitudes regarding marriage, partnership, abortion, on values and beliefs, on opinions regarding family life and on the possible intervention of the state in this sphere.

All the questions that did not belong to optional modules (i.e. migratory and contraceptive biographies; the values and opinions section) made up the "core questionnaire". The dominance of biographical items reflected the general orientation of the whole FFS project. That dimension merits more extensive consideration.

All the biographical modules were organised along the same lines: the history of the interviewee was described in chronological order, starting from the first event for partnerships, births, contraceptive practice or occupations, or from the age of 15 for residence or education; successive rows in each table referred to successive events or to sequential spells, with their dates and other information that characterised them. Tables dealing with partnerships, children and other pregnancies were preceded by a series of questions likely to identify the total number of events, which also defined the total number of rows to be filled in. Similarly, the migratory table was preceded by a question on the total number of moves since the age of 15. By contrast, there was no such total in the modules dealing with the contraceptive, educational and occupational biographies.

Three aspects of this arrangement require comment:

Biographies were collected independently from one another, except for "other pregnancies" which were expressly associated with live-birth intervals. Only when the interviewee could not remember the year of some event, was the interviewer

invited to help her with references to other dates already collected. It may be reasonable to put distance between partnership histories and birth histories to avoid any "adjustment" of dates, such that births which occurred before a union or a marriage were included in the partnership period. But data quality in contraceptive biographies could have been improved had spells been more systematically referable to partnership or pregnancy dates (the interviewers were instructed to"[t]ry to assist him/her, if necessary, by probing for contraceptive use before and after marriage, before and after births, etc."). Similarly, making explicit links between residential and occupational biographies or, at least for women, between occupations and births, would also have been beneficial (Auriat, 1996; PUF, 1999). Some countries did make such efforts to bring consistency between various biographies.

Adopting chronological order for the organisation of biographies is a "natural" tendency, but not one endorsed by all survey practitioners. Some prefer to start from the most recent events and move backwards to more remote times (Simon and Tribalat, 1993). This is not common practice, and we know of no comparative evaluation of the two methods. Significantly, however, CVs often approach occupational biographies in reverse chronological order. Some researchers, based on psychological experiments, conclude that independent events (e.g. examination dates) are better recalled in reverse chronological order, while the remembrance of events possibly linked by a causal order (e.g. successive visits to medical doctors) is better organised by chronological order (Tanur, 1987). In the FFS, Canada was a case apart in some respects here.

Accounting for events, before recording any details, is a standard procedure for births (with some probing on the no-child answer). This is not so with partnerships, and still less where a distinction is made between marriages and non-marriages. It is more customary to answer that question indirectly by counting the number of rows completed in the table.

2. The national questionnaires

Only six of twenty-four countries (Czech Republic, Hungary, Latvia, Lithuania, Slovenia and Spain) adhered to the exact, or near-exact, model questionnaire. Some countries made an effort to incorporate most of the questions (in particular Bulgaria, Italy, Germany, New Zealand and Portugal). However, most national questionnaires departed, sometimes significantly, from the model. In some countries (e.g. Belgium, Finland, Norway and Poland), the survey took place so early that the model questionnaire was not yet available, but in most cases the reasons for discrepancy lay elsewhere: either it was felt necessary to adapt the questionnaire to specific national attributes, or the survey was just one in a series and priority was given to consistency between current and past questionnaires for comparability purposes. In the latter case, similarities to the FFS model questionnaire were sometimes only marginal. This resulted in major difficulties when the national files were to be put in a standard format. That specific difficulty will be considered in the section devoted to the Standard Recode File.

a. Questionnaire structure and interdependency between the biographies

When compared to the model, some national questionnaires adopted a totally different sequence of biographies, and this may have had some impact on the content of the answers. (For the effect of the organisation of questionnaires on the answers, see for instance Gremy, 1993). In Austria, Belgium, New Zealand, Poland and the United States, for instance, the questionnaires commenced with the educational and occupational biographies, followed only afterwards by partnerships and children. In Canada, Finland, Norway and the United States, questions on pregnancies and children came before those on partnerships. In Sweden, most information on children was concentrated at

The FFS programme has been a "quantum leap forward" in our knowledge of fertility and family behaviour throughout the UNECE region. Drawing lessons from that experience to improve comparability in future international programmes is another small step in the same direction.

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the very start of the questionnaire, in or just after the household composition table. In Estonia, questions on childhood and parents – far more numerous than in any other country – together with the migratory biography, were placed after partnership and fertility (children and contraception) biographies and even after the opinion questions. But the most original sequence of biographies was in Poland, where it seemed as if the most delicate topics – relationships and contraception – had been tucked away at the very end of the questionnaire, so as to avert too many early refusals.

Most discrepancies between questionnaires were associated with the unequal degree of independence between the biographies. For most biographies, the model questionnaire was based on independence, but some countries introduced links between the sequential stages, either because it seemed more logical to introduce some association between the events, or because it might help improve interviewees' recall. But the reverse is also true: in some countries, biographies were split where they had been grouped in the model questionnaire.

Norway and Sweden are examples of a complex association of birth, educational and occupational biographies. Children's birth dates were recorded in a table and women were asked for their educational, occupational and inactivity spells in the birth intervals. As a further step, women in Switzerland were first asked about each period of education, occupation or inactivity; then about their migrations and partnerships in each of these periods. In the same spirit, some countries sought to ease and systematise respondents' efforts to remember and organise their biographies, by listing reference dates in a table, chart or sheet. In Finland, New Zealand and the United States, respondents were asked to enter key events of their occupational and family life on a "life summary chart". In Switzerland, the questionnaire alludes to an "aide-mémoire" to help the respondent reconstitute the stages of her life. In Estonia, the interviewer was to fill in a "summary life history chart" so as to immediately check the respondent's consistency; etc.

Details of own births and other children were collected in the same biography in the model questionnaire. The logic was different in questionnaires where own births were extracted from pregnancy histories; inevitably, details of other children had to be collected separately (as for Italy, Switzerland and the United States). In Belgium, women were first asked about any children who had ever lived with them in the same household, then about pregnancies and resulting children: this makes it unlikely that the date of death of children who died in maternity hospitals would be included. In France, own live-born children were first dealt with, then other children, but only those under 18 years currently in the household. Likewise in Finland, own children came first, followed much later by children from other partners (in both cases, pregnancies with no live births were enumerated separately).

b. Definition of events and spells to be considered

Each biography-type event was assigned a definition in the FFS model questionnaire. Most of these definitions were clear; some included a minimum duration to be considered, most often three months (migratory, contraceptive and occupational biographies); but that did not give the model questionnaire sufficient precision in all cases. We have made a full comparison of national questionnaire definitions with the model based on our reading of the questionnaires, and the instructions to the interviewers, when available to us.

Biographies could be rendered non-comparable by differences in definitions or differences in criteria that separated one spell from another. That was the case with migratory biographies, when the minimum duration was as long as one year (Finland) or where movements within the same locality, such as "commune" in Switzerland or "settlement" in Lithuania were excluded.

Contraceptive biographies were another case in point, when questions were limited to the main method or to the last method used in an inter-pregnancy interval (Italy and Poland).

Things were often much less clear-cut than suggested by the above examples, and it is very hard to gauge the incidence of a potential discrepancy in definitions. For instance, on parents' divorce or separation, the model questionnaire was fairly vague ("Did your parents ever separate or divorce?" If yes, "How old were you when this occurred?"). No minimum duration was indicated for separation; the case of parents who had never lived together was not envisaged; it is not known if age was given at divorce, at *de jure* separation or at *de facto* separation; in the case of several separations only the first was to be considered, but this was specified only in the instructions. So, it is doubtful whether the results are wholly comparable in countries that adopted the model questionnaire, and an even more vexed issue for countries which added further particulars into their questionnaire.

The model questionnaire set no minimum duration for either parents' separation, or leaving the parental home, partnership or co-residence with "other children". So, attempts to add precision in some national questionnaires compounds the confusion on the comparability issue: minimum stay away from parental home was three months in Estonia, four in the United States and six in Sweden and Switzerland; partnerships must have lasted at least one month in France and three in Belgium and Greece; "other children" must have lived a minimum of three months with the respondent in Switzerland, six months in Estonia and one year in Finland. In Belgium, the interviewers were instructed to record certain events, such as partnerships and jobs that lasted at least three months (Lodewijckx, 1996). How are we to know if other countries gave instructions to their interviewers on these points?

The PAU compliance table prepared by Erik Klijzing is helpful, with asterisks to call attention to problematic comparisons; but it is only a pointer, and a more detailed scrutiny is called for. In most cases, it will be up to researchers to come to their own decision as to whether "partnership" is the same in France ("*vie en couple*"), in Switzerland ("*faire ménage ou foyer commun*") and in Canada ("living together as husband and wife").

c. The choice of response items and the specific codes for semi-open questions

Semi-open questions were those where post-coding was to follow international standard classifications: on education (ISCED1, ISCED2) and on occupation (ISCO). For the few semi-open questions and some closed questions, the initial coding by countries for their national files may have differed from the choices offered by the FFS standard procedure. For countries with their own questionnaires, the risk was even more evident as questions and definitions may have differed from the model. But even when the model questionnaire was adopted, response items were sometimes added to closed questions, and specific classifications for education or occupation were used. These had no effect on comparability only if items in the national nomenclatures could be grouped to reproduce the standard ones.

The clearest example is that of educational level: there were very few countries in which the educational system fitted the standard UNESCO classification (Dourlein *et al*., 2002). According to the PAU compliance table, comparability issues exist for all countries except Hungary and the Czech Republic and possibly Spain and Finland.

Instances of divergences in the response items between the national and model questionnaires abound. The widest variations occur for the following questions: possible reasons for the

conclusion of a partnership, reasons for leaving the parental home, methods of contraception, and in the occupational biographies.

3. A brief evaluation of comparability of the biographic questionnaires

All the above examples point to the same conclusion. Even if similar information could have been obtained from the 24 countries that participated in the FFS, the questionnaires used to collect it were in some cases structured very differently. It is difficult to establish from a comparison of the results that these differences led to non-comparability of the data. A special scientific protocol would be needed to test such a hypothesis. But considerable caution must be exercised when using material which the Standard Recode Files present in a systematic and standardised format but which was collected by very unsystematic tools.

In most cases, the wisest attitude is probably to disregard cross-country differences if they are not substantial. If needed, a rule of thumb could be to accept results from statistical tests only if they are significant at a 1 per cent level, instead of the 5 per cent threshold commonly used.

D. THE STANDARD RECODE FILES AND THE INTERNATIONAL DATABASE

Since the model questionnaire – even the core modules – was only a suggestion to the countries, a comparative database could only be constructed if the variously designed national files were converted into a standard file by re-coding the national data into a standard format. A model file was designed – the so-called Standard Recode File (SRF) – that fitted the model questionnaire. Transforming the national information which reflects the national questionnaires into standard information was the key technical challenge for the FFS. The PAU staff wrote the instructions and a codebook for the SRF to enable each country to do the work. In some cases, the PAU team was deeply involved, especially in the initial phases of testing the process; in the later stages, it kept in close contact with the countries to maximise the internal consistency of results.

1. Framing the Standard Recode Files

Even so, it was taxing work for countries whose questionnaires departed significantly from the model. Larry Bumpass, commenting on the United States' situation, where the National Survey of Family Growth (NSFG) was taken as the basis for the FFS Standard Recode File said: "It took a GREAT deal of work to hammer the NSFG data into the FFS format". In the United States codebook, he stresses: "It is important to understand that this survey was conducted completely independently from the FFS program. (...) Every effort has been made to recode comparable variables as closely as possible to the FFS coding. Nonetheless, exact matches were often not possible even when similar variables were collected. (...) Many variables in the FFS are not represented in these data, and the coding of a number of others could only be approximated." Similar comments were made by other countries such as France.

From these and some other examples, the difficulties in constructing a fully comparable tool can be classified under three main headings:

Most stemmed from differences between national questionnaires and the PAU model. Apart from excluded questions and excluded items in the answers, there were also significant differences in wording – groupings, blanks, approximations, etc. – which required adaptations.

In a few cases, there were differences in basic concepts. For instance, in Italy, the concept of "head of household" (excluded from the usual Italian standard definitions) was replaced by "economically independent in your parental family". In the United States, the source data contain employment, rather than job spells. These include periods of paid employment only.

In some cases, there were differences between national classifications and the international standards that were difficult to resolve. In France, educational attainments were assigned to the three aggregate levels of ISCED by inference from the information about the age at the end of initial studies and level of education.

2. Considerations on the Standard Recode Files

A number of participating countries adhered more or less exactly to the FFS model questionnaire. For these surveys, transforming the national data file into the standard file was a relatively easy, if cumbersome, task. Broadly speaking, the results are reliable. With very few qualifications, much sound comparative analysis should be possible from a pooling of the recoded files.

This is far from the case for countries which developed their own questionnaire and, more especially, their own strategy for gathering information on individual biographies. For these, the situation was not unlike that which prevailed in the Comparative Fertility Surveys (CFS) conducted in the UNECE countries two decades earlier; surveys, which had not been harmonised *ex ante*, were to be reconciled *ex post* for comparative statistical analysis. Then, researchers had to develop their harmonised database by sifting through the questionnaires, national data files and all the material and information made available by the national representatives. The FFS reversed this and asked those responsible for their national surveys to convert their data into a pre-set format, before opening the database to comparative research by outsiders.

There are pros and cons for both options. In the CFS procedure, the comparative database was created by its analysts to fit in with their scientific objectives. Their decisions may have lacked knowledge of national peculiarities and conditions of data collection, which they were not involved in; a different team undertaking a new but different comparative analysis might have required other choices for data harmonisation. In the FFS, the files were adapted to a normative standard by the authors of the national surveys, who were fully aware of their national peculiarities and conditions of production. However, their choices were not necessarily suited to all research aims. Future comparative analysts will clearly lack the familiarity with the raw data they would have gleaned when creating their own database.

The comparative database should never be taken at face value to produce unqualified results. A minimum guarantee for their informed use would be to have the questionnaires and codebooks distributed together with the files and continuously supplemented by users' comments on errors and pitfalls in the database.

3. A brief evaluation of the international database

The Standard Recode File is the cornerstone of the FFS edifice. It turns the mixed bag of material collected by the national questionnaires into comparable files. It paves the way to comparative analysis. The file design follows that of the model questionnaire. The PAU's task was to supervise, and in many cases carry out, the conversion. The systematic operation of this exacting method is one of the most remarkable achievements of the entire FFS project. Turning heterogeneous information into a standard product for a large group of countries is a challenge faced by various statistical institutions: e.g. Eurostat for census data in Europe, the World Health Organisation for causes of death in the world, the United Nations Population Division for world-wide population estimates and projections, etc. Never before had such a complex biographical questionnaire been subjected to standardisation for such a large number of countries, through a decentralised and controlled procedure. This is a remarkable innovation deserving due acknowledgement.

But you cannot turn dross into gold. The gaps between the national questionnaires and the model proposed by FFS can only be filled by reasonable approximations. The most important thing is probably to document all the stages of that complex procedure as fully as possible and to make the information available to users of the database, to prevent misinterpretation of the outputs.

E. CONCLUSION: LOOKING BEYOND THE FFS

The FFS was an instructive experience, and it is to be hoped that new FFS-type programmes will be launched in the UNECE region. Preparations for the FFS involved much reflection on the scope for setting up a comparative survey and harmonising its outcomes; evaluation of the procedure has given rise to more thought on the same issues. These assets must be built on.

When the FFS was launched, it was known that similar sampling methods could not be adopted across the UNECE region and that national methods were to be relied on, provided they were based on a sound random procedure. This was a wise approach, given the cross-country diversity of sampling bases, but a bigger focus is needed on obstacles to randomness, i.e. non-responses. Clear guidelines are required for a harmonised approach to the issue.

The first and probably most important point is fieldwork. “Good manners” can hardly be codified in such a way that response rates are maximised everywhere, but a consensus might possibly be reached, for instance on fundamentals like the minimum number of visits that must be made to a sampled address before it is classified as a non-response.

The second issue is non-response rates, which should be defined with sufficient precision for a single index to be shared by the participating countries. It is too important an indicator of data quality to leave its content open to doubt, especially in a comparative perspective.

A third issue relates to tackling procedures. Substitution should be carefully debated before it is accepted and, if acceptable, should be controlled and unified in practice. Post-stratification should also be discussed: criteria for the measurement of distortions due to non-responses and criteria used in re-weighting should not be totally country-specific. Given the general objectives of a survey, there should be some international convergence on a limited set of variables that can ascertain the statistical validity of the information gained from the respondents.

Likewise, it is not really conceivable that all countries in the vast UNECE region could adopt a single model questionnaire without minor or major adjustments. It is rarely possible even in an administered region like the European Union. Competing national objectives (including comparability with previous national surveys) will long be at odds with ideal international comparability.

Two specific sets of difficulty arose with the FFS: first, when surveys were taken before the model questionnaire was drawn up, and secondly, when surveys were taken independently of the FFS and were then “hammered into” the FFS tools *ex post*. Obviously, this is not a criticism of the countries concerned, whose special characteristics did much to enhance the programme. This was particularly so with the “pioneers” on whose accumulated experience the model questionnaire was built. On a more general note, the FFS had to choose between cross-country comparability and geographical coverage. The choice of the latter was probably a wise decision, since analysts are always free to drop from their comparisons any countries where they consider the comparability of data to be problematic. That said, better co-ordination with the participating countries could help reduce the widest deviations.

CHAPTER 9

MOVING BEYOND ELABORATE DESCRIPTION: TOWARDS UNDERSTANDING CHOICES ABOUT PARENTHOOD

John Hobcraft[*]

A. INTRODUCTION

Twenty years ago I had just become Chief of the Comparative Analysis Section of the World Fertility Survey and was faced with the thrilling, but daunting, task of setting out strategies for comparative analysis for the WFS World Conference (Hobcraft, 1981). At that time, there was a real sense of excitement at the prospect of using comparable information from a wide range of developing and developed countries to improve our knowledge and understanding of the determinants of fertility and related demographic processes. Moreover, the WFS had ample resources, enabling us to build a staff of up to six high quality professionals - in the comparative analysis section alone - and to employ a wide range of other able scholars as consultants. The excitement spread beyond the WFS, to encompass the UN system (both the Population Division and the UNECE had major projects) and to funders of research; many universities had their own major projects for comparative analysis of the WFS data.

Yet it is clear that the results did not live up to my own or to others' highest expectations: comparative analysis projects are today much less common; the Demographic and Health Surveys, the daughter of the WFS, have never had a serious comparative analysis capacity (beyond the mainly descriptive Comparative Studies); and many funding agencies now see other approaches as more likely to show returns. Some of this shift of emphasis results from international agencies (notably USAID and UNFPA, the main funders of all these comparative survey efforts) placing ever-greater emphasis on within-country work, and finding it harder to justify funding less evidently policy-relevant research. Since the overwhelming locus of comparative research has always been in the developed countries, this is understandable, even if scholars may argue that it is short-sighted. But the scientific community has also felt that the returns from such comparative analyses tend to be meagre. It is thus less likely to direct its focus on these issues, and consequently there are often difficulties in obtaining funding.

In this chapter, I shall reflect upon the progress in international comparative analysis of co-ordinated survey efforts over the past 20 years, and place some of the work on the current round of Fertility and Family Surveys in that context. I shall also try, in a limited way, to pose and answer questions about the viability of comparative research for the future. Perhaps inevitably, given my own investment in this field over the period, I shall be less gloomy than many about the prospects, although I shall argue that a profound shift of emphasis is required in order to make real progress. Since most of the rationale for fertility surveys is their utility for the individual country where the information is collected, and much of the funding comes from national sources, it is usually essential that attempts to harmonise survey efforts for comparative analysis can be justified nationally. This issue has always been a more acute one for the surveys co-ordinated

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by UNECE, both because it has less funding leverage and because the differing traditions within countries dictate that comparability over time is at least as important as comparability with other countries.

Yet the main problem for comparative analysis, over and above the sheer scale of data manipulation, has always been the rather limited number of explanatory variables which are sufficiently standardised and accorded enough credibility to be collected in every country. In part, this problem arises from a lack of a commonly accepted theoretical framework for understanding fertility behaviour, but it is also arguable that we shall never remedy the problem without better agreement and testing of comparable information.

Let us take a concrete example: fertility in Italy is extremely low, with a period total fertility of 1.19 in 1998 – why? Can this be understood without reference to levels elsewhere in Europe? Of course not, and we surely must all believe that the real factors which determine fertility levels in Italy are broadly the same as in Sweden and other societies, even if we acknowledge some role for path-dependency. This statement does not mean that the factors determining fertility in different societies are at the same levels, but rather that it is variations in these factors which bring about variations in levels of fertility. This is an accounting truism if, as all too often, we limit ourselves to the proximate determinants of fertility; but such an emphasis is profoundly limited and boring. At the other extreme, it is possible to trawl a wide range of factors which are too remote as determinants of fertility to be anything but vaguely linked, and then we do not know what to do with resulting relationships. Work on broad value or attitudinal constructs such as post-materialism is in this class, though of value and interest in its own right (see, for example, Beets *et al*, 1999; Casterline, 1999; Moors and Palomba, 1995 & 1998; Van de Kaa, 1998).

What is required is a serious attempt to reach agreement on the proximate real determinants of fertility (as opposed to intermediate proximate determinants) and on how to incorporate measures of these into surveys. I shall further develop this theme later, but still feel that the broad framework elaborated by Hobcraft and Kiernan (1995) is a good starting point, with its strong multidisciplinary emphasis and focus on issues very close to the decision-making process about becoming a parent. The broad framework includes both pronatalist pressures and constraints on parenthood, including issues of biology, time-management, employment, human capital, housing and ideas, as well as cross-cutting issues of medium-term security and gendered structures. Also included was a 'bold sketch', an attempt to apply the framework to an interpretation of fertility trends in Western Europe since the 1930s and of current broad regional differentials. The framework can easily encompass a broad explanation for the precipitous fertility declines seen over the past decade for eastern European countries, especially through its emphasis on the medium to long-term security aspect in reaching decisions about childbearing. Nevertheless, there are formidable measurement and conceptual problems in applying this framework at the individual level. It is also clear that some of the institutions which shape or constrain choices about becoming a parent operate at the national level, although their effects and consequences may be modified according to individual perceptions, choices and circumstances.

B. STRATEGIES FOR COMPARATIVE ANALYSIS REVISITED

In 1980, I correctly surmised that most comparative analysis of the WFS (and other survey data subsequently) would take the form of 'comparative description' or of 'replicated models' (Hobcraft, 1981). Comparative description is simply assembling and interpreting the same tabulations for multiple countries, which is

often of considerable descriptive value, but is never likely to provide deeper insights because of the limitations in the number of variables which can be used.

Replicated models have generally been the endpoint of most regression-based comparative analysis: the common feature is to take a standard regression model (i.e. with the same variables and usually the same categories for those variables) and to fit this model separately for each country. The comparative analysis then usually involves a descriptive comparison of the parameter estimates across the different countries. The main results usually take the form of statements and interpretations about how often particular parameters or variables are statistically significant and some descriptive commentary about the patterns of variation in the magnitude of the associations by geographical region or 'culture'. Sometimes such analyses also serve to pick out countries with apparently anomalous relationships, which merit further attention. Occasionally attempts are made to relate patterns in the regression parameter estimates to a limited range of aggregate national indicator variables.

At one level, such replicated analyses are immensely informative and have served to enhance our (albeit limited) understanding of behaviour. Since I shall subsequently express my disappointment that we have not moved on further, I make no apology for selectively drawing on my own efforts in this area to illustrate some of the benefits and insights gained. Evaluating the relative importance of mother's and father's levels of education as correlates of child mortality, and discovering that mother's education is generally a more powerful correlate – but that this was not so in the sub-Saharan African countries included in the analysis – does move our understanding forward, both by demonstrating some regularity and by raising further questions concerning the reasons for discrepancies (see Hobcraft, McDonald and Rutstein, 1984; and Hobcraft, 1993b & 1994). The finding that very strong and nearly universal associations exist between birth intervals and child survival was among the most influential of results from WFS comparative analyses in helping to re-establish the health rationale for family planning (Hobcraft *et al.*, 1983 & 1985; Hobcraft, 1994). The theoretical implications of the lack of association of fertility behaviour with parity beyond the second birth were of considerable interest, although never fully resolved (Rodríguez *et al.*, 1984; Hobcraft, 1985 & 1993a; Ryder, 1986). Many other examples could be given, but these suffice.

Yet, with hindsight, more ambitious theoretical insights have not emerged from comparative analysis. In 1980, I had high hopes that we would move beyond descriptive comparisons of replicated models towards 'global models' and towards multilevel models. Yet there has been very little progress in either of these directions. Let me begin by explaining what such strategies for comparative analysis involve, and why they are of critical importance for understanding demographic processes, whilst acknowledging that these are ambitious goals where progress is likely to be slow. However, moving theory forwards may make such progress essential.

Global models mean systematic exploration of the extent to which regression models for different countries can be constrained to have not just the same range of regressors, but also to have the same parameters. In principle, such testing should be straightforward and yet in practice it is vanishingly rare. Yet surely progress towards such global models is essential for good theory. Currently, we appear to be satisfied with very vague specifications, such as expecting a positive association of age at first birth with level of education, but surely this is not enough? A deeper understanding would involve a closer specification, whereby the strength of the relationship was the same everywhere net of the correct range of other controls. It would also require the development of models incorporating factors which bring about variations in the strength of the relationship, and these

would be a step towards the fuller model. To give a simple example, we know that levels of contraceptive use are generally higher and fertility levels lower, for every level of education within virtually all societies, when they reach higher aggregate levels of education, as well as in those societies where education is more prevalent than others. As a consequence, our models need to incorporate the societal levels of education (or other developmental correlates) which account, however imperfectly, for the variations in the apparent strength of the individual-level relationship.

Why has so little effort or progress been made in these deeper elaborations? There are several reasons, some technical, others more fundamental, which I will discuss below. These need to be tackled if real progress is to be made.

Among the key issues are the sheer computational and organisational problems in handling the analysis of significant numbers of large-scale surveys. Anyone who has undertaken comparative analysis using ten or more such surveys will acknowledge the difficulties involved in data handling, concerns about comparability (even if the questions are the same, their cultural significance may differ), and in digesting, distilling, and displaying the results in a manageable form. Add to this the issues of computational power and software availability, which were certainly major constraints in the 1980s, when most WFS comparative analysis was done. Multilevel analysis still requires the use of specialist software. Small wonder that most analysts are satisfied when they achieve limited goals and do not go the extra mile to pool datasets across countries, and then test explicitly, thoroughly and carefully for 'global' parameters, or attempt to assemble relevant national or regional indicators for inclusion in multilevel models.

Yet I do not believe or accept that laziness or computational constraints lie at the heart of our lack of progress towards global models and consequent theoretical insights. Of much greater importance are the very limited range of determinants of fertility (or whatever other demographic process is being considered) which have been included in the major comparative surveys to date and, relatedly, a lack of conceptual and theoretical clarity about what elements should receive priority for inclusion.

Moreover, we must never lose sight of the fact that no major comparative international survey operation has yet been undertaken with the primary purpose of understanding or explaining fertility behaviour. Rather, the funding and goals have been (quite properly given the main actors) to provide country-specific information of policy and programme relevance. Comparative analysis has been a secondary goal at best and an explicit theoretical orientation has been lacking (a possible partial exception was the series of 'value of children' surveys, although the focus was too narrow to permit real progress towards global models).

As a result of these limitations, and probably also because of the tastes of the demographers who played a significant part in the design and implementation of these surveys, far more effort has been invested in ever more detailed analysis of the minutiae of event history information and its interplays, with regular forays into the safe haven of the proximate determinants of fertility. Over time, the content of these surveys has moved towards ever-greater complexity and detail on these elements, and there has been very little progress at all in refining and improving the range and depth of 'background' variables (this very term is surely contemptuously dismissive of the importance of understanding the processes underlying the behaviour being described). Much though I have enjoyed contributing to the exploitation of the limited demographic information from such surveys over the past twenty years, the increasing attention to minute wrinkles of interplays between demographic event histories strikes me as ultimately a fairly barren occupation.

It is time for a broader stock-taking on how to make scientific progress in understanding fertility behaviour, beyond that which comes from collations of widely differing small-scale studies on different societies, or from detailed society-specific accounts. Neither of these latter approaches holds out great hope for reaching general theoretical understanding, although the rich insights they appear to provide should be used to inform the more structured approach advocated here.

The time is ripe to learn from our experiences so far and to consider a wide-ranging international comparative effort, which would include a significant national survey component, with the explicit goal of enhancing our understanding of fertility behaviour. The difficulties in any such project are huge, not least reaching agreement on a common and wide-ranging set of constructs for the proximate real determinants of fertility and then measuring them. Any such study would have to gather information about societal and institutional constraints, and set out to discover how these are perceived to impinge upon individual decision-making with regard to parenthood. Moreover, we would have to persuade funders to invest in this project, both by convincing them of its fundamental value and importance, and of its likely ability to make progress. In the remainder of this paper I shall begin the process of sketching some of the design and content that might form a starting point for launching such an enterprise.

C. DESIGN ISSUES

Improving our understanding of if, when and why couples and individuals choose 'freely and responsibly' to become parents is of fundamental importance to progress in demography (for varying interpretations see Chesnais, 1997; Cliquet, 1991; Coleman, 1996; Hobcraft, 1996; Kiernan, 1993; Lesthaeghe, 1995; Lesthaeghe and Surkyn, 1988; Simons, 1999; Van de Kaa, 1987, 1994, and 1996). Implicit in this statement is an understanding that we are not just considering the process of having a birth, but recognise that there is an underlying prior decision process (perhaps too often involving lack of choice or access to the means of implementing choice, especially not to have a child), and that the decision is not just to have a birth, but to become a parent, which has long-term implications (see Hobcraft and Kiernan, 1995).

It is by no means clear that we are going to make major progress towards enhancing our understanding of such processes through single-round retrospective surveys, although more imaginative pathways through questionnaires for different risk groups and more imaginative questions might take us further than existing instruments. Clearly, more complex questionnaire structures are much easier to administer with computer-aided interviewing. Thus, for example, we would probably ask different questions of parents and the childless. The structure of questions to the childless would probably be very different depending upon their context (for example age or partnership context). We might well ask quite different questions to recent parents and to those who have not had a further child after some time.

Moreover, there is a strong case for specifically structuring the samples to ensure that the groups faced with choices are included. For example, a decision could be taken to exclude teenagers, since normative pressures and realised fertility mean that many teenage births do not result from choice, and these rare cases, though important in many other ways, would simply muddy our attempts at understanding. Equally, a first comparative study of this type might include only those who are in a partnership, in order to concentrate resources on the context where most births take place, in order to keep the study focused. Thus, some clear decisions have to be made to set out to enhance understanding of more commonplace or normative behaviours, rather than trying to cover all contexts and lose focus. Of course, understanding the departures from norms is also valuable, but there is a trade-off between depth of understanding and breadth of coverage. Further comparative

studies to enhance our understanding of less normative contexts for becoming a parent, such as early or non-cohabitational childbearing, would likely be subsequent efforts, if we gained a real return from a more focused comparative effort (some progress has been made with the FFS data - see Beets and Dourleijn, 1999; Kiernan, 1999; Klijzing and Macura, 1997).

A further consideration in trying to improve our understanding of processes may well be to adopt a design which involves a prospective element. The initial sample might be of a 'case-control' type, whereby a sample of new parents is matched with controls who are childless (though what the control factors should be needs further thought – age, partnership, employment and housing contexts might feature, though that might preclude demonstration of the key importance of these factors in determining choice, and age might suffice). Batteries of current and retrospective questions would be asked about circumstances and perceived context and choice elements for each group, but with a very clear and somewhat limited focus on proximate real determinants of fertility. These two groups would then be followed up annually for perhaps five years, providing rich information on perceptions, context, choice and decision-making from the new parents on subsequent pathways to second births and from the initially childless on pathways to deciding whether to become parents or remain childless. Such a design would provide good prospects of getting insights into some of the key elements of decisions about parenthood, though leaving out many more marginal contextual questions.

Any major undertaking of this type would require serious collaboration between researchers from varying disciplinary perspectives and would require much give and take. Each discipline tends to believe that it is only possible to obtain useful information from very complex and detailed batteries of questions – examples would include demographers always wanting full event histories or perhaps overemphasising the detail on the proximate determinants; economists insisting on the full battery of questions on income or assets; or psychologists wanting long inventories of questions to get reliability. Inevitably, development of instruments which could retain a broad decision-making focus and were applicable cross-nationally, whilst retaining enough disciplinary respect (e.g. use of simpler proxy questions), would necessitate a great deal of careful pilot work, probably involving qualitative work with focus groups and small-scale tests of field instruments.

One of the biggest problems of maintaining comparability across nations arises from the need to explore individual responses and perceptions to the institutional context of fertility choice. For example, what are the realities and perceptions of: contraceptive and abortion access; institutional support for combining parenthood with employment; benefit, health, education and employment structures and their long-term security? More specifically these national contexts include:

- Structures of housing markets, e.g. the relative importance of private rental and social housing and their context as acceptable forms of long-term housing with security for parenthood;
- The ease of access to housing;
- Gender related contexts, such as the division of domestic labour, parental leave entitlements, access to child-care, norms about combining employment and motherhood, labour market segmentation, access to part-time work, provision of school meals, compatibility of school days with employment hours, after-school care, etc.;
- The complex range of state benefits and tax structures for parents, lone parents, unemployment etc.

But it is the interplay of individual choice and perception with these institutional supports and constraints which is of interest – how do these national contexts shape and structure decisions about parenthood? And how much more

difficult is it to depart from normative contexts in different structures?

A further design issue is the range and number of contexts that could usefully be explored. Once again, a focus on enhancing understanding suggests that a comparative study of this type need not try to cover as many countries as possible. Rather, there may be considerable benefit from retaining a purposeful focus and carefully selecting both contrasting and superficially similar countries in order to help elucidate the nature of choices involved. But the key goal of trying to elaborate a 'global' (or European or developed country) theory of the elements of a common decision-making process would need to be kept firmly in sight. Ensuring a spread of partnership stability and contexts for childbearing, of differing housing markets, of employment patterns and contexts, of gender structures, of state supports, and of levels of fertility would mean that a significant number of countries would have to be included in order to try to tease apart the relative importance of these factors. It is also clear, however, that they are sufficiently inter-linked to make a full cross-classified design by context unachievable.

The last design issue to be considered here may also be among the more controversial. Most social scientists ignore the possible part that genetics plays in our reproduction and yet it is inconceivable that genes and reproduction are not linked. In the context of our discussion of understanding the determinants of fertility, there are two key points to make. Firstly, there is some evidence that, even in the highly controlled fertility environment of Denmark today, there is a clear genetic component to fertility behaviour. Secondly, and probably more importantly, there are grounds to suppose that gene-environment interactions may play a significant part in determining fertility behaviour, although the evidence for this so far is less direct (Kohler *et al*, 1999).

In order to explore these issues it would, with the current stage of knowledge about genetic markers, be necessary to design a study to include siblings (and quite likely twins), making sample selection much more expensive and complex. Whilst such questions are undoubtedly important in understanding fertility behaviour, it would almost certainly be over-ambitious to attempt to incorporate such an element in a comparative study at this juncture, both for operational and political acceptability reasons. But if clearer evidence of significant genetic components of fertility behaviour is established, and the prospects of identifying specific genes related to fertility behaviour improve, it might prove possible to incorporate the collection of genetic material at some stage during a prospective study, subject to all of the usual and very important ethical caveats.

In the light of this discussion, the best prospects for a well-focused and productive comparative study, aimed at deeply understanding fertility behaviour, would appear to come from the following key elements:

- A five year prospective study comprising a fairly large initial sample of new parents and of non-parents (not in the process of a pregnancy), matched for age and possibly partnership context, with both samples being restricted to those in a co-residential partnership and to perhaps ages 20 to 39, with both partners being included in the study;
- Qualitative individual and focus group studies, and objective aggregate institutional data collection would supplement the prospective survey;
- A focus on the likely real determinants of fertility which are proximate to perceptions, choices and decisions about becoming a parent;
- A strong interdisciplinary perspective, with attention to education and training, employment, housing, gender and partnership and an emphasis on structures, medium-term prospects, constraints, perceptions and contexts;

- Close attention to both perceptions and real experiences of time and money costs of childcare and childrearing, of the domestic division of labour, of medium-term prospects for security of partnership, employment, housing and state benefits, and of requirements for becoming a parent in all of these contexts;
- A clear orientation towards understanding fertility behaviour in the context of choices about becoming a parent (rather than simply having a birth) and explaining variations both within and between countries, with careful attention to the choice of societal contexts in order to maximise explanatory leverage;
- The overarching goal of moving towards global models, where the search is heavily focused on finding similar responses to similar circumstances and contexts across a wide range of countries – this requires quite complex and carefully conceptualised models, incorporating a range of different determinants and a multilevel approach to include the societal and institutional contexts.

D. SOME ASPECTS OF CONTENT

In this section the goal is to outline some key issues on the topics requiring attention, and to make some tentative suggestions for progress, whilst acknowledging the considerable investment of time required to make such suggestions sufficiently concrete to implement a comparative study. In particular, I shall try to focus on the benefits from contrasting recent parents with the (initially) childless, and issues where comparative analysis might provide special insights. Moreover, the illustrations will often stress the interplay between context (normative, institutional and structural) and individual perceptions, choices and decisions.

1. Requirements and constraints

The first broad topic to consider comprises the issues related to the requirements and constraints concerning choices about becoming a parent. What is the perceived relative importance of the various domains? For example, Malpas and Lambert (1993), in an EU survey, found that about half of the childless (aged both under and over 25) put ‘stability of the couple’s relationship’ at the top of the list of factors that may influence the number of children, with availability of suitable accommodation and issues to do with the ‘economic crisis’ and unemployment being the next most important.

This theme deserves further exploration, including attention to all criteria that are perceived as important criteria for becoming a parent and, more importantly, what different individuals in differing circumstances perceive to be the levels of these requirements. What partnership context is seen as appropriate for becoming a parent? Is there an ideal age range? What types of housing are deemed suitable, in terms of space, environment and tenure? What is seen as an appropriate level of income and employment security? What are the perceptions about requirements for child-care and parenting inputs? What would be the anticipated gender requirements for becoming a parent, including the domestic division of labour and continuing employment, and how would parenting, employment and leisure be combined? How far are there perceived conflicts between societal constraints and norms, and the outcomes that would be preferred (e.g. full- or part-time employment of mothers)? What are the perceptions about medium-term security of employment, housing, partnership and state benefits? Are there additional criteria of readiness for the timing of becoming a parent, which are bound up with stages in careers or unwillingness to accept changes in lifestyle (foregoing leisure or income, or increased burden of responsibility)? All of these questions relate to much recent literature on the topics of fertility and yet we do not know many of the answers (see, among others, Bernhardt, 1993; Drew *et al.*, 1998; Friedman *et al.*, 1999; Gerson, 1985; Hobcraft, 2000; Hochschild, 1990; Julémont, 1993; Kiernan, 1992; Lamb, 1987; Pinnelli, 1995; Presser, 1995).

The ability to contrast new parents with the childless at the outset of the study would permit a number of interesting explorations about differences in reported perceptions and contrasts with reality of circumstances, and allow these to be related to decisions about becoming a parent.

For the new parents, it would be desirable to explore the issues surrounding their choice (or lack thereof) to become parents. How much did they want the pregnancy at the time (on a scale rather than a dichotomy)? How far do they perceive themselves as having met all or most of the requirements for parenthood? What happened in the last couple of years to make them choose parenthood now? Did attitudes or circumstances change? Did change involve resolution of differences in attitudes or desires between the partners? Did they overcome a major constraint in housing, employment, partnership or likely security? Or was the shift to becoming a parent much more diffuse, involving very little in the way of easily identifiable changes, but rather involving a more subtle drift towards 'readiness'?

The initially childless group would provide information on whether and when they think they might become parents. In addition, those who do not wish to become a parent 'now' would be asked a series of questions about how far they saw themselves as having already met the differing requirements for becoming parents and about what they saw as the major personal constraints to parenthood that meant they would not want to become parents now. On the other hand, if they expressed readiness to become a parent at the time of the first interview, the questions about the extent to which they felt they had met the requirements would still be used, but perhaps followed up by similar questions on recent changes as those used for the new parents.

This detailed information would then be used to explore the differing contexts of choices about becoming a parent in different countries. How far are the requirements and constraints the same across different societies? How much is their relative importance altered by the societal context? What is the extent of disagreement by gender and how does this vary by context? Are there consistent patterns of difference in requirements and constraints across countries by indicators of stratification (income, class, education, employment status, housing, etc.)?

Although the search for global models would undoubtedly prove challenging, there are good reasons to believe that this type of study would yield some progress. First, by concentrating on the practical choice factors, the decision process, and the requirements and constraints for becoming a parent, it would make it much more likely that commonality between societal contexts would be seen, although we would expect that this very context would have to be built into global models. Secondly, the attempt to cover a fairly full and interdisciplinary range of these factors should improve the prospects of common responses, though again set in their context. We would expect far less chance of global models emerging if more remote determinants of fertility, or more obtuse attitudinal, behavioural or social science measures were used. It is the concrete nature of the enquiry which holds out hope of progress.

2. Prospective follow-up

A longitudinal study, which follows the two groups for perhaps five years, would enable much greater insights into the underlying processes of choice about parenthood. This prospective study could further enhance the comparison of perceptions with changing circumstances and permit some exploration of apparent cognitive dissonance. We shall only sketch some of the elements here, because the approach would necessarily evolve in the light of the initial pilot, qualitative and survey work.

For the initially childless, it would be possible to monitor changing perceptions and circumstances, and for many, the processes involved in becoming a parent. How far did the transition to

parenthood involve meeting the requirements and constraints that they perceived as being important and unmet at the time of the start of the study? Does couple dissonance narrow as part of this process? What else changed? Consequentially, we would get information as to how far choice was made and the extent to which it was rationally based upon the (hopefully) full range of criteria about requirements and constraints being met.

For the initially new parents, we would focus on how far the realities of parenthood matched their expectations in terms of parental leave, return to employment, means of child-care, parental division of domestic labour including child-rearing, and the costs of children. We could also monitor how uncertainty and change affected the extent to which they continued to meet their requirements for parenthood and thus assess the security elements of the framework proposed by Hobcraft and Kiernan (1995).

A further important focus would be on the transition to the second child. Monitoring their experiences with the first child, including the perceived problems, costs and benefits, and their changing circumstances (partnership, housing, employment, access to child-care, etc.) would provide an important backcloth to understanding who makes the transition to having a second child. How far is this decision made, having gained better information through the experience of parenthood? What are their own perceptions of the choices and processes involved in having a second child? To what extent do they feel constrained to have a second child through their perceptions of the normative context (e.g. prejudice against only children) – in other words is there less choice exercised?

3. Contextual information

There are several contexts within which decisions about becoming a parent are taken, including state provision of benefits and tax structures, certain relevant legislation, public or private provision of schooling and childcare, gender structures, normative constraints, and the media shaping of ideas (see for example, Avramov, 1993; Blanchet and Ekert-Jaffé, 1994; Ditch *et al.*, 1998; Folbre, 1994; Gauthier, 1996; Gauthier and Hatzius, 1997; Hantrais and Letablier, 1996). In a comparative framework, these differences in context at the national level are likely to shape or mediate the individual choices about becoming a parent, although some effects may be small.

In addition, the aggregation of individual behaviour, for instance remaining in full-time or part-time employment after becoming a mother – or not – provides a context from which departures may be easier or more difficult, whilst in part also reflecting the structural contexts outlined previously.

Thus, some means has to be found to capture the relevant contexts in any attempt to formulate global models, undoubtedly using multilevel models (for highly relevant discussions of the micro-macro dimensions of such models see Blalock and Wilken, 1979 and Coleman, 1990).

E. CONCLUSION

In taking the opportunity provided by the Flagship Conference to reflect upon our meagre progress to date in moving forward our real understanding of fertility behaviour through cross-national comparative surveys, and trying to suggest ways in which future endeavours might be more fruitful, I have undoubtedly failed to pay enough attention to or to give sufficient credit for the comparative analyses that have already been done using FFS data. Several analyses have made creative use of the available information and are contributing to our understanding of fertility behaviour (for example, Beets and Dourleijn, 1999; Di Giulio *et al.*, 1999; Jensen, 1997; Klijzing and Macura, 1997; and many of the papers presented at the IUSSP International Population Conference held in 1997 in Beijing, and the EAPS European Population Conference held in

1999 in the Hague). We must also remember that such analyses often have a long gestation period and many more can be expected to emerge over the next few years.

My goal was to try to lift the discussion to a higher plane, and reflect upon the longer-term returns from the comparative analysis of international collaborative large-scale surveys on fertility. Most such surveys have been intended to be comparable, but due to the constraints of funding, and an overemphasis on purely demographic description and accounting, they have not had a major impact on enhancing our understanding of when and why couples and individuals choose to become parents, and what factors are involved in their beliefs of what constitutes responsible parenthood. Analysis, though creative, has been constrained by the content of the surveys, and has been secondary. A problem with all secondary analysis is that the data collection instruments were designed and implemented by others who had different agendas, and so the data are thus rarely likely to be ideal for the purpose of the secondary analyst. As a consequence, it is hardly surprising if the returns in enhancing our understanding of choices about becoming a parent have not progressed far enough to meet the highest expectations.

In sketching a design and some of the content for a possible comparative study of the factors that shape choices about parenthood, I have been all too conscious of the ambition involved and the inevitably tentative nature of the proposals. However, for real progress to be made in enhancing our understanding of choices about becoming a parent, there are several requirements that would have to be met.

A first requirement is the need for a group of committed scholars to come together to organise and carry out a study of this type. This would have to be a consortium of investigators, probably with at least one from each country involved and probably from the major demographic centres in the developed world, representing a flexible mix of disciplinary skills and backgrounds. This team would have to find seed funding, hammer out agreed approaches and initiate pilot work, including qualitative studies in each of the countries. There would need to be a strong commitment to both collecting and analysing the results by the same team, with considerable cross-national collaboration. Much time would have to be spent in reflecting upon the conceptual and analytic approaches to be taken, especially in order to move towards the goal of a global model of decision-making about becoming a parent. Very substantial funding would be required from national and international sources, and fieldwork might well best be carried out by the private sector. The funding would have to be guaranteed for both the data collection phase and a major programme of comparative analysis.

Despite the formidable problems in achieving all of this, it seemed worth ‘flying a kite’ in this forum to discover whether the proposed approach resonates with scholars and funders sufficiently for the idea to be taken forward. My own belief is that real progress requires us to be bolder than hitherto, and that even if the most ambitious goals for moving towards global models did not ultimately prove successful, the returns in enhancing our understanding of choices about parenthood would be very substantial indeed. If successful, further progress could then be made in looking at non-normative parenting and other topics. But the time has come to step boldly away from inward-looking, ever more detailed studies of the timing of fertility and its proximate determinants. Instead, we need to move decisively towards recognising that choices are made to become parents, not simply to have a birth. Thus we need to undertake a co-ordinated and determined effort to understand the decision processes involved, beginning in a grounded way and avoiding entrapment with over-elaborate constructs, which are too remote from the actual considerations of becoming a parent.

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CHAPTER 10

PARTNERSHIP AND FERTILITY – AN INCOMPLETE REVOLUTION?

David Coleman[*]

A. INTRODUCTION

In their contributions to the FFS Flagship Conference, some of which were included in this volume, Dirk van de Kaa has situated the FFS project in the global and European scene and Robert Cliquet has sketched its history. Miroslav Macura has overviewed some of the results, especially from eastern Europe; Patrick Festy and France Prioux have given a penetrating statistical critique; and John Hobcraft has offered constructive criticism of techniques and suggested a programme for future research. Frances Goldscheider has emphasised the need to consider the context in which individuals live and Daniel Courgeau has creatively proposed various methods whereby that difficult task might be accomplished. Finally, Ron Lesthaeghe, in awarding a good end-of-term report, has pointed to some weaknesses to be addressed and Lars Østby has applied balm to any minor hurts thereby inflicted. These and other contributors have done much valuable analysis and advanced ideas for future research. Almost everything that could have been said, has been said. A few points, however, may still remain to be made.

B. EVALUATING NOVELTY

The first question to ask is what the FFS has actually told us that we did not already know, at least in general terms? Some have suggested, unkindly and we must hope inaccurately, that much of the FFS achievement is a statistical sophistication of the obvious. However, the novelty of findings should be apparent from the papers presented to the Conference. New knowledge might fall into four areas: saturation of the effects of contraception in reducing fertility; the failure of demographic convergence between regions and countries; the effects upon unions and fertility of family-related public policies; and the relationships between the timing of fertility and union formation and vice versa.

C. THE NEXT FFS PROGRAMME?

We are in a rather turbulent period in demography and its funding. Population Index has folded, the International Union for the Scientific Study of Population (IUSSP) has claimed asylum in Paris, and the United Nations Population Fund was for a time itself in need of aid. Not, perhaps, a propitious time to urge a programme of research to develop further the work of the FFS. Nonetheless Dirk van de Kaa has done so in an editorial in the European Journal of Population (1999); our colleagues Robert Cliquet, John Hobcraft and Ron Lesthaeghe have all suggested or implied something similar in their contributions to the Conference.

Its possible scope has already been outlined. As to its structure, such a programme should not be confined to national statistical institutes. It should involve collaboration with universities and other independent centres of research. International demographic bodies on which representatives of both kinds of institutions sit, for example the IUSSP and European Association for Population Studies, should put such a collaborative project high on their agenda. Any further research should

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cast its net wider. For example, teenage births, excluded from the FFS, are a major issue in some countries, notably the United States, New Zealand, various central and eastern European countries and the United Kingdom (which was not a participant in the FFS). Births to immigrants and their descendants, now 10 per cent or more in many European countries, cannot be ignored. FFS-type samples may be inappropriate for their study. Perhaps a useful task would be to collate existing national surveys on the fertility of immigrants or foreign populations and synthesise the results, a project never yet attempted, to show how transnational populations are developing throughout Europe.

In order to move from technical analysis to explanation, future enquiries must include information, direct or indirect, on income – including welfare payments – and on housing careers. Economic models are still the most powerful explanatory models we have, as long as they include welfare-related transfers as well as pay. FFS surveys, as they stand, cannot test economic interactions with fertility and thus a major area of potential explanatory value is excluded.

The completion of FFS surveys in UNECE countries which through poverty or isolationism have not yet held them is a further obvious need. The creation of a greater UNECE area including New Zealand is a particular achievement of Miroslav Macura and his staff, one which the world's press appears to have not yet noticed. There are good scientific reasons why this UNECE hegemony in respect of any future FFS successor should be extended to the remaining countries of the developed world, no matter how far they are from Geneva. Explanatory models should fit all relevant populations.

D. WHAT IS DEMOGRAPHY ABOUT? THE PROBLEM OF EXPLANATION

A common theme of many contributions presented at the Conference was the need to move on from technical analysis to explanation, even though the task of adequate description is still far from complete. The need to enhance the explanatory capacity of future surveys, by giving much more emphasis to potential explanatory variables, was apparent from many contributions. But the techniques and variables now available from the FFS are logically incapable of accounting completely for the fertility patterns which have been so ably analysed in technical terms.

For example, plausible comments are made in a number of chapters in this and the companion volume about the effects on fertility of the rôle and status of women. Such potentially crucial components of explanation cannot yet be formally integrated into a model based on FFS data. Partly this arises from the 'atomistic' individual nature of the techniques appropriate for the analysis of such surveys, as Courgeau noted earlier in this volume. But in addition, few questions were asked which would enable the situation of any individual respondent with respect to partnership equality to be evaluated. The ultimate goal must be to incorporate all potential variables, however currently qualitative, into models which can be tested.

E. LIMITATIONS OF DEMOGRAPHY AS AN 'OBJECT SCIENCE'

Concerns about the descriptive rather than the explanatory emphasis of demography, as raised in discussions at the Conference, have echoed a more general complaint put eloquently by Dykstra and Van Wissen (1999). According to those critics, demography is an 'object science', defined by its subject matter, not defined by its fundamental underlying theories and their scope. This subject matter comprises three micro-behavioural domains – fertility, mortality and migration – and the manifestations of those domains at macro levels of population. The resulting strength of demography is an emphasis on measurement and number. The downside is weakness of theory and explanation. According to these authors (with whom I

agree), demography has insufficient views of its own about the basic mechanisms behind human behaviour. Instead, other behavioural and social sciences hold the keys to the relationships between demographic events and the behaviour of individuals and systems, as others have also suggested recently (Pavlik, 2000). What should we do about it?

F. MICRO PARAMOUNT?

An associated issue, following on from the description / explanation imbalance in demography, relates to the balance between micro and macro studies, and to the new central position of event-history analysis in demography, which the FFS surveys reflected and encouraged. A few years ago Maire Ni Bhrolchain (1993) presented a controversial paper disputing the moral and technical superiority of cohort analysis. Today it seems we are confronted instead with the promotion of 'micro paramount'. Event-history analysis is widely presented as *the* new demographic paradigm eclipsing all others, moving demography beyond description to explanation (Willekens, 1999). The results from the FFS so far, however, have perhaps emphasised instead its rather limited scope. Using current methods and mostly proximate variables, there is an apparent lack of explanatory power in such an atomistic approach. Exclusive emphasis on micro approaches risks us evolving towards 'demography without population'. English cuisine used to be described as 'chips with everything'; under the new dispensation, demography may be becoming 'event-history analysis with everything'.

Quite important areas of demography remain where a macro-component is the essence of the problem, and cannot easily be incorporated technically into the context of event-history analysis. Population behaviour and other phenomena are not just the aggregate of life histories. Other levels of processes exist which are important, and in some respects more fundamental. In aggregate, the sum of the individual fertility processes has fundamental effects upon age structure. Population ageing, support ratios and pensions funding – which so preoccupy policy-makers today – are obvious examples, although admittedly they may present no great theoretical or conceptual problems.

Other issues arising from aggregate behaviours, however, are less well understood, for example the consequences of population decline (as opposed to population ageing or zero growth) on the economy, social relations and the environment. Even more interesting possible interactions of the macro and micro are the way in which a variety of demographic changes influence perceptions, attitudes, behaviour and life-chances of an individual in the present. These changes include population ageing, the end of growth and start of decline, the density of occupation and so on, which are the lagged mass consequences of individual actions in previous years.

We might also consider the effects and costs on individuals of the so-called Second Demographic Transition behaviour. The new patterns of family formation and living arrangements have important consequences: they increase the number of households and reduce their average size; and they increase the number of one-parent families and 'reconstituted' families, thereby raising the number of children who experience unconventional parenting to a quarter or more in some countries. Do 'new lifestyle choices' in parenting and divorce tend to transfer the costs of children from parents to other individuals through tax and welfare systems, by increasing welfare costs and housing demand, for example? And what about the effects on the personal and psychological development of the children themselves? Some national studies (e.g. in the United Kingdom; Kiernan, 1992) claim that children's lives are disrupted and their prospects reduced by some of these transitions. Other studies, e.g. in Sweden, find no such effects. Either way, new forms of upbringing will affect the environment in which future cohorts live, forming part of their 'context'. And if some aspects of the Second Demographic

Transition increase welfare costs, the question might arise: can we afford an ageing population and the Second Demographic Transition at the same time? In short, is the Second Demographic Transition economically sustainable?

G. AN INCOMPLETE REVOLUTION

Some of the chapters in this and the companion volume have considered whether union formation and fertility trends are convergent between European countries (e.g. Billari and Kohler, 2002). Further synthesis of the FFS material might ask if the so-called Second Demographic Transition is convergent across Europe, or will it remain in its present partial, half-complete state? As we all know, over the last 50 years in many countries in the region, sexual and reproductive behaviour formerly uncommon and regarded as immoral, illegal or simply unimaginable has become commonplace and unremarkable: this includes divorce, cohabitation, abortion and illegitimacy. The criteria for convergence are not laid down. However, nowhere has such behaviour become universal. With few exceptions (such as pre-marital cohabitation in Sweden), in no country has any of these become the lifetime experience of the majority of people. In some they have made little impact. Will these trends stall at their present levels, adding to the diversity within and between European populations, or will they move forward to encompass eventually all the populations in the area? Not all cultural revolutions succeed. The Reformation, seen as progressive at the time, stopped at more or less its present boundaries in the 17th century, boundaries perhaps not coincidentally similar to those which now interest us. Perhaps the Second Demographic Transition will also remain incomplete.

H. OUTSTANDING PROBLEMS IN DEMOGRAPHY

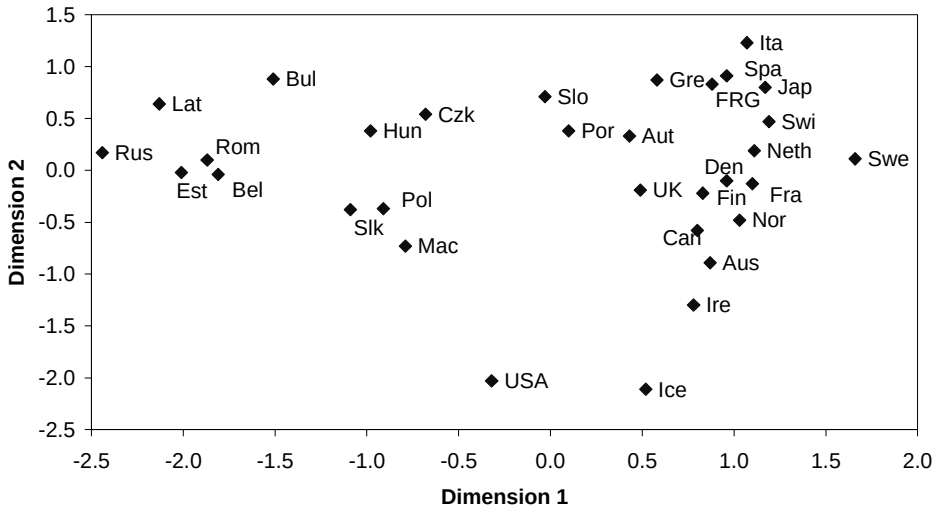
Turning finally to other and wider matters, we may discern three major related challenges in demography today. The first is to explain the variation of fertility in developed countries over time and space, especially the very low fertility (TFR under 1.4) which has persisted now for years in some countries. The second is to ascertain whether there are any mechanisms which will tend to induce fertility eventually to stabilise at a defined aggregate figure, especially if by some miracle of convenience it happens to be at replacement level. An answer to that would probably also provide an answer to the third, ultimate question: why does any intelligent and educated individual ever have any children at all in our society? Material returns are derisory, spiritual ones difficult to define and surprisingly negative when measured. This problem may be one whose solution lies outside conventional demography, in the realm of biology, genetics or psychology.

I. SALVATION THROUGH WELFARE – JAPAN AND SOUTHERN EUROPE

We might start by searching for a path to salvation from low fertility through comparison. In asking questions about international fertility differences and their problems, Japan may be regarded for some purposes as part of southern Europe, in respect of its variables relating to fertility, living arrangements and household structure (Figure 10.1). The southern European co-prosperity sphere is here depicted by a multi-dimensional scaling configuration of 31 developed countries according to their relative position with respect to ten demographic variables in 1995.

This intriguing association depicted in Figure 10.1 may only be a function of an inadequate range of variables, but it has been remarked on elsewhere. While the cultural, religious, linguistic and historical gulf between Japan and southern Europe is large, similarities remain. At present, all share TFRs under 1.4, yet low levels of childlessness (except Italy); all have low levels of cohabitation and births outside marriage; late marriage is marked in all of the countries; children are more likely to live at home with parents rather than live independently before union formation; and

Figure 10.1. MD-SCAL configuration of selected developed countries including Japan, 1995



Note: MD-SCAL, multi-dimensional scaling (Kruskal and Wish 1978) computes matrices of proximities or dissimilarity between objects, usually from several standardized variables simultaneously, and then attempts to find structure in the data by positioning close together in n-dimensional Euclidean space those objects (here countries) which are in overall terms most similar according to the statistical distances in the matrix derived from the data.

Source: Council of Europe (2001) and various national demographic yearbooks.

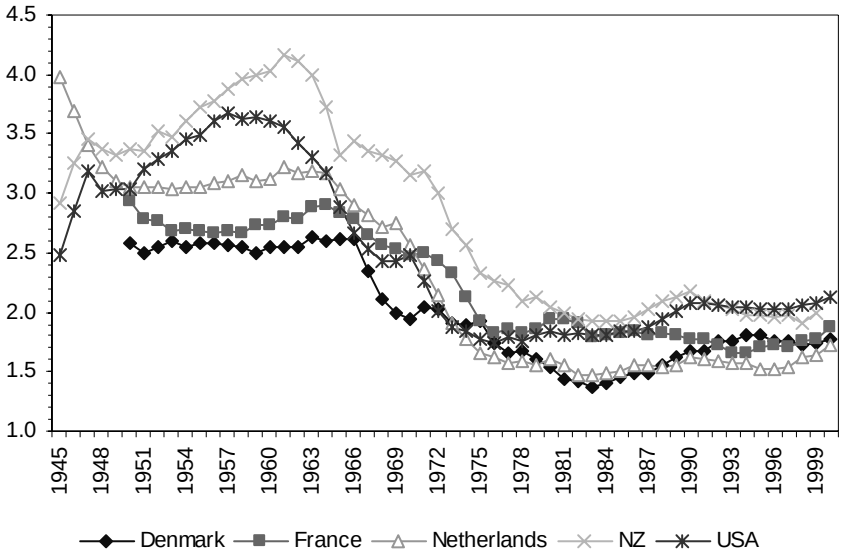
complex households are more common. In addition, mortality rates are low, either in absolute or relative terms. Parts of southern Europe, like Japan, have kept their traditional patterns of marriage and household, which are somewhat different from the rest of Western Europe, and more characteristic of populations east of the Hajnal line. Family support, not external provision, for dependants is the tradition, a tradition now interacting unhelpfully with exceptionally rapid population ageing.

A common feature in these areas is the high level of time and effort devoted to the care of elderly parents (who are not infrequently co-resident) by the middle generation, especially by women (Bettio and Villa, 1996). In all cases differentiation between the sexes remains marked, with sharp distinctions of labour within households. Until recent years, there were also low levels of female education, work force participation and employment status, and involvement in the political world.

Inequality of the sexes, mentioned on numerous occasions at the Conference and elsewhere (e.g. in the work of McDonald, 2000; Kojima, 1993; Atoh, 1995, and others) seems to offer a potent way of accounting for differences in fertility and other demographic behaviour of this kind. According to this view, fertility cannot be expected to rise in such countries until relationships between the sexes become more equal both in the private as well as in the public domains, and the burden on women is thereby more equally shared and the incompatibilities between workforce participation and childbearing accordingly eased. The paradigm for this, of course, is Scandinavia where some of the highest fertility rates in Europe are to be found, along with the most comprehensive systems of state family support and high workforce participation rates of women. Give the women of Turin and Tokyo the same opportunities as those of Trondheim, and all will be well, is the message. However, this argument, although perhaps promising, runs headlong against evidence of another kind.

Figure 10.2 shows that the high fertility countries of the developed world, the ones to which we might look for an example of sustainable levels of fertility,

Figure 10.2. Trends in total fertility rate, industrial higher-fertility countries 1945-2000



Source: Council of Europe (2001) and various national demographic yearbooks.

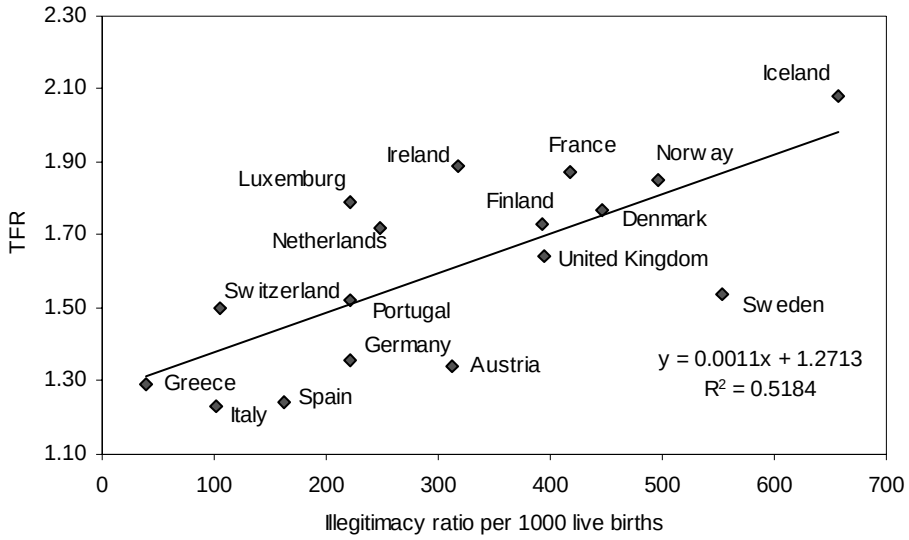
are led by a country to which none of the above considerations apply, namely the United States. New Zealand is not far behind. Any explanation that accounts for the higher than average birth rates in Norway, Denmark and France must also account for those of some of the English-speaking countries overseas. Better institutional public-sector family support may help to explain higher fertility in north-western than in southern Europe but it can hardly work in the same way with the American example.

It may be that the private sector, in a flexible economy with an unregulated labour market such as that of the United States, can respond to new demands for affordable childcare services at least as fast and efficiently as the more sclerotic socialised systems of Europe. Such private-sector systems might even be more sustainable in the face of adverse economic trends. The recent cut-back in the much-cherished but very expensive Swedish system, part of a worldwide trend, raises the question as to whether some public-sector welfare systems offering child support may not be sustainable, especially if they also face competing demands from an ageing population. No general explanation of fertility change can be considered satisfactory unless it can embrace these salient cases, as well their opposites in southern Europe and Japan. These are the kinds of issues which further rounds of the FFS might be designed to accommodate.

J. SALVATION THROUGH ILLEGITIMACY?

Outside eastern Europe, the only relatively high-fertility countries in the developed world tend also to have high levels of illegitimacy, high levels of divorce and cohabitation and, less clearly, high levels of childlessness (Figure 10.3). Do women only have second or higher order children if they can do it their way, if necessary without a husband or resident man or his firm commitment? How interesting if, to paraphrase Kravdal (1997) women need children more than they need men. What are we going to do with half the population? Is Sweden the pioneer of a "Third Demographic Transition", where men become redundant and enjoy a pampered drone-like existence, insofar as they do not do so already?

Figure 10.3. Total fertility rate and illegitimacy ratio, selected west European countries around 2000



Source: Council of Europe (2001).

It has been suggested that in the United States it is the private sector which has responded to these pressures and demands from women, while in the Scandinavian countries they have been translated into welfare support. In the United States, a number of factors have reduced the conflicts between childbearing and work: the rise of the service sector and of shift work; the weakening of the social requirement that women care for their own children most of the time; the corresponding acceptability and feasibility of having children when single; and hence a weakening of the male rôle as the usual or main provider. Private, not public sector childcare has advanced accordingly (Presser, 1989; Rindfuss, 1991). As women start to earn more, they can afford to support more children through their own efforts via childcare. Perhaps the more choices that women can make, the more babies they will have?

K. SALVATION THROUGH GENETICS?

Dirk van de Kaa has suggested that we should ask economists, sociologists, political scientists and others to extend our enquiries into the ultimate question as to why anyone has children at all. I agree with John Hobcraft and with Hans-Peter Kohler that we should extend this invitation to researchers in genetics and evolutionary biology, fields where astonishing progress has been made and which we ignore at our peril. We should not fear to break the commandment handed down to us by sociological patriarchs from the 19th century, instructing us that 'only social facts may explain other social facts'. In the 21st century I hope we can escape from Durkheim's ideological straightjacket. This bracing issue, of biological influences upon human behaviour, is becoming more widely raised in demographic circles, e.g. by Foster, 2000; Morgan and King, 2001; and others. Brute creation has known for a thousand million years that for the individual, reproduction is expensive, dangerous and personally futile. It is time we woke up to the implications of that for ourselves (Coleman, 1999). And if it is objected that nothing is known about the genetic covariates of fertility (irrespective of 'causality'), then let us find out. Routine bioassay of individual respondents in surveys need involve nothing more intrusive than licking a stamp. Which will be the first demographic survey to incorporate such sampling as routine?

L. ACKNOWLEDGMENTS

It would be appropriate to end this volume by referring to the debt which demographers and policy-makers owe to so many people and institutions for the development of the FFS and for the new and important insights into family and fertility which it has made possible. It is impracticable to list all, but it may be appropriate to mention a few where thanks are especially due. First those who have funded the FFS; the UNFPA and others. As always the most fundamental equation in demography remains zero money = zero research. The CBGS promoted the Brussels meeting at which these papers were presented. It has had a long history of advancing demographic research. Its current director, Thérèse Jacobs, and her colleagues and staff made the meeting possible; Robert Cliquet, its former director, was an FFS godfather. The Population Activities Unit of the UNECE has played the primary rôle in the FFS for 13 years now, first under its late head, Joe van den Boomen and now under Miroslav Macura. Among the PAU team, Erik Klijzing, to whom the running of the project was so successfully entrusted and to his successor Martine Corijn, deserve special thanks. In these papers we see only the first fruits of their efforts.

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ANNEX 1

Flagship Conference

PARTNERSHIP AND FERTILITY A REVOLUTION?

Organised by PAU – UN/ECE (Geneva), CBGS (Brussels) and UNFPA (New York)
with sponsorship of the European Commission and
under the auspices of EAPS

Brussels, Belgium
29-31 May 2000

FINAL PROGRAMME

Monday, 29 May 2000

9:00 – 10:00	Registration and coffee/tea
10:00 – 12:00	**Opening session** Dirk van de Kaa (chairperson)
10:00 – 11:00	Opening address (Dirk van de Kaa) Opening statement by a representative of the Flemish Government Opening statement by representatives of CBGS, UNECE, EU and UNFPA
11:00 – 11:30	**Fertility and partnership developments in Europe in the 1990s.** Miroslav Macura, Population Activities Unit, United Nations Economic Commission for Europe, Switzerland
11:30 – 12:00	**Origin and history of the FFS project: achievements and limitations.** Robert Cliquet, European Population Committee, Belgium
12:00 – 13:30	Lunch break
13:30 – 16:30	**Session 1: Partnership behaviour** *Andras Klinger* (chairperson)
13:30 – 14:00	**The state of European Unions: An analysis of FFS data on partnership formation and dissolution** *Kathleen E. Kiernan, London School of Economics, United Kingdom*

14:00 – 14:45 **Disruption of the first 'parental union' in Sweden and Hungary. Focusing on policy and gender effects.**
Livia Olah, Stockholm University, Sweden

Household and union formation in a Mediterranean fashion: Italy and Spain.
Francesco C. Billari, Max Planck Institute for Demographic Research, Germany
Maria Castiglioni, Università di Padova, Italy
Teresa C. Martin, Instituto de Economiá y Geografiá, Spain
Francesca Michielin, Università di Padova, Italy
Fausta Ongaro, Università di Padova, Italy

Impact of population related policies on selected living arrangements. Comparative analyses on regional level in Belgium, the Netherlands and Switzerland.
Beat Fux, University of Zurich, Switzerland
A. Doris Baumgartner, University of Zurich, Switzerland

14:45 – 15:30 *Break with poster presentations*

Changing family in Lithuania.
Vlada Stankuniene, Lithuanian Institute of Philosophy and Sociology, Lithuania

Determinants of non-formation of partnership: a French-Japanese comparison.
Jean Louis Rallu, INED, France
Hiroshi Kojima, Ministry of Health and Welfare, Japan

Repartnering among Swedish men and women. A case study of emerging patterns in the second demographic transition.
Eva Bernhardt, Stockholm University, Sweden

The effect of economic conditions on the changing determinants of women´s first union formation in the United States, Canada and Sweden.
Frances Goldscheider, Brown University, USA
Pierre Turcotte, Statistics Canada, Canada
Alexander Kopp, Statistics Canada, Canada

Does unemployment bother the young couples? An output from the French Fertility and Family Survey 1994.
Olivia Ekert-Jaffe, INDED, France
Anne Solaz, INED, France

15:30 – 16:30 Discussion
Erik Klijzing, University of Bielefeld, Germany

16:30 – 17:30 **Special Session: FFS database**
Charlotte Hoehn (chairperson)

16:30 – 17:00 **An evaluation of the FFS database: the comparability issue.**
Patrick Festy, INED, France
France Prioux, INED, France

17:00 – 17:30 Discussion

17:30 – 18:30 *Reception*

Tuesday, 30 May 2000

9:30 – 12:30 **Session 2: Fertility behaviour**
Martine Corijn (chairperson)

9:30 – 10:00 **Moving beyond elaborate description: towards understanding choices about parenthood**
John Hobcraft, London School of Economics, United Kingdom

10:00 – 10:45 **Family policies, working life and the third child in low-fertility populations: a comparative study of contemporary France and Sweden.**
Diana Corman, Stockholm University, Sweden

Free to choose – but unable to stick with it? Norwegian fertility expectations and subsequent behaviour for the following 20 years.
Turid Noack, Statistics Norway, Norway
Lars Østby, Statistics Norway, Norway

Desired and realized fertility in selected FFS countries.
Christine Van Peer, CBGS, Belgium

10:45 – 11:30 *Break with poster presentations*

Reproductive behaviour in women after induced abortion and labor - a comparison of Russian cohort data with FFS data for Poland, Latvia and Hungary.
V. I. Kulakov, Russian Academy of Medical Sciences, Russian Federation
Ekaterina M. Vikhlyaeva, Russian Academy of Medical Sciences, Russian Federation
E. I. Nikolaeva, Russian Academy of Medical Sciences, Russian Federation
A. Brandrup-Lukanow, WHO Regional Office for Europe, Denmark

Greek Fertility Surveys: 1983,1987,1999.
Haris Symeonidou, National Centre of Social Research, Greece

Start of childbearing, level of education, and total number of children in Europe.
Ronald C. Schoenmaeckers, CBGS, Belgium
Edith Lodewijckx, CBGS, Belgium

Pill discontinuation in New Zealand.
Dharmalingam, University of Waikato, New Zealand
Sandra Baxendine, University of Waikato, New Zealand
Ian Pool, University of Waikato, New Zealand
Janet Sceats, Portal Consulting and Associates Ltd., New Zealand

11:30 – 12:30 Discussion
Jerzy Holzer, Warsaw School of Economics, Poland

12:30 – 14:00 Lunch break

14:00 – 17:00 **Session 3: New approaches and methodological innovations in the study of partnership and fertility behaviour**
Eva Bernhardt (chairperson)

14:00 – 14:30 **New approaches and methodological innovations in the study of partnership and fertility behaviour.**
Daniel Courgeau, INED, France

14:30 – 15:15 **Data quality issues in the scope of international comparison FFS surveys.**
Andrej Kveder, Slovenian Academy of Sciences and Arts, Slovenia

Toward a child-centered life course perspective on family structures: multi-state early life tables using FFS data.
Patrick Heuveline, NORC and the University of Chicago
Jeffrey M. Timberlake, NORC and the University of Chicago

The measurement of educational attainment in the FFS: comparing the ISCED-classification with information from educational histories in 17 European countries.
Edith Dourleijn, NIDI, The Netherlands
Aart C. Liefbroer, NIDI, The Netherlands
Gijs C. N. Beets, NIDI, The Netherlands

15:15 – 16:00 Break with poster presentations

Fertility behaviour and context effect: how to take into account? Some evidences from Italian FFS data.
Giulia Rivellini, ISTAT, Italy
Susanna Zaccarin, University of Trieste, Italy

Estonian family and fertility survey: Experience from transforming statistical environment.
Kalev Katus, Estonian Interuniversity Population Research Centre, Estonia
Allan Puur, Estonian Interuniversity Population Research Centre, Estonia
Luule Sakkeus, Estonian Interuniversity Population Research Centre, Estonia

Study of parallel careers in demography with improvement in non parametrical approaches.
Ewa Fratczak, Warsaw School of Economics, Poland

16:00 – 17:00 Discussion
Jan Hoem, Max Planck Institute for Demographic Research, Germany

Wednesday, 31 May 2000

9:30 – 12:30 **Session 4: Partnership and fertility behaviours as interdependent processes**
Henri Leridon (chairperson)

9:30 – 10:00 **Interrelations between partnership and fertility behaviour.**
Antonella Pinnelli, University of Rome La Sapienza, Italy
Alessandra De Rose, University of Rome La Sapienza, Italy
Paola Di Giulio, University of Rome La Sapienza, Italy
Alessandro Rosina, National Institute of Statistics, Italy

10:00 – 10:45 **The impact of union formation on first births in Germany and Italy: are there signs of convergence?**
Francesco C. Billari, Max Planck Institute for Demographic Research, Germany
Hans-Peter Kohler, Max Planck Institute for Demographic Research, Germany

Union commitment, parental status and sibling relationships as sources of step-family fertility in Austria, Finland, France and West Germany.
Elizabeth Thomson, University of Wisconsin-Madison, United States of America
Jan. M. Hoem, Max Planck Institute for Demographic Research, Germany
Andres Vikat, Max Planck Institute for Demographic Research, Germany
Alexia Prskawetz, Max Planck Institute for Demographic Research, Germany
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Ursula Henz, Stockholm University, Sweden
Amy L. Godecker, University of Wisconsin-Madison, United States of America
Vladimira Kantorova, INSEE, France

Fertility and the role of family strategies: family life in Hungary, Italy, The Netherlands and Sweden.
Willy Bosveld, University of Amsterdam, The Netherlands

10:45 – 11:30 *Break with poster presentations*

A comparative analysis of the effect of pregnancy in cohabiting unions on formal marriage in Canada, The Netherlands and Latvia: A causal event history approach to interdependent processes.
Melinda Mills, University of Groningen, The Netherlands
Frank Trovato, University of Alberta, Canada

Differences in contraceptive behaviour of men and women in Slovenia regarding their partnership and parenthood history.
Majda Cernic Istenic, Slovenian Academy of Sciences and Arts, Slovenia
Dunja Obersnel Kveder, Slovenian Academy of Sciences and Arts, Slovenia
Andrej Kveder, Slovenian Academy of Sciences and Arts, Slovenia

Fertility of married and unmarried couples in Europe.
Elizabeth Brown, Université de Paris, France
Alfred Dittgen, Université de Paris, France

The effects of education and employment on marriage and first birth.
Gert Hullen, Federal Institute for Population Research, Germany

"What happened in the seventies mummy?" Periodicity in New Zealand family formation.
Ian Pool, University of Waikato, New Zealand
Dharmalingam, University of Waikato, New Zealand
Janet Sceats, Portal Consulting and Associates Ltd., New Zealand

11:30 – 12:30 Discussion
An-Magritt Jensen, Norwegian University of Science and Technology, Norway

12:30 – 13:30 Lunch break

13:30 – 17:00 Session 5: Research and policy agendas for the future
Miroslav Macura (chairperson)

13:30 – 14:00 **Realising the potential of FFS1 with contextual data.**
Frances Goldscheider, Brown University, United States of America

14:00 – 14:30 **Fertility and partnership change: FFS contributions and requirements for the future.**
Ron Lesthaeghe, Vrije Universiteit Brussel, Belgium

14:30 – 15:00 Break

15:00 – 16:45 Panel on the research and policy agendas for the future
Lars Østby, Statistics Norway, Norway
Larry Bumpass, University of Wisconsin-Madison, United States of America
Werner Simon, DG Employment and Social Affairs, European Commission
Patricia Ceyssens, Parlementary Commission Equal Opportunities, Belgium

16:45 – 17:00 **Closing address**
David Coleman

ANNEX 2

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