The Effects of Labour Market Participation on Fertility Decisions:

Gender Differences in Cross-National Perspective

Christian Schmitt

Dissertation

eingereicht zur Erlangung des Grades
eines Doktors der Philosophie (Dr. phil.)
der Fakultät für Soziologie Universität Bielefeld

Betreuer:

Prof. Dr. Martin Diewald, Universität Bielefeld

Prof. Dr. Jost Reinecke, Universität Bielefeld

Diese Dissertationsschrift wurde im Sommersemester 2008 an der Fakultät für Soziologie der Universität Bielefeld eingereicht. Das Promotionsverfahren wurde durch die mündliche Prüfung am 10. September 2008 abgeschlossen.

Gedruckt auf säurefreiem und alterungsbeständigem Papier nach ISO 9706.

Universität Rostock / Sozio-oekonomisches Panel (SOEP)

Kontakt:
DIW-Berlin, Mohrenstraße
10108 Berlin
E-Mail: cschmitt(ed)diw.de

Preface

In writing this thesis, I have perhaps proceeded like many Ph.D. students: I pondered the state of the art in my field of research, arranged and systematized ideas, and carefully worked out a concept. In doing so I have ended up exploring more than one dead-end street, but fortunately I always came back to the main path of this work a little bit wiser than before. Now, that some time has passed since I finally submitted my thesis, I am finding out that – exactly as some good friends predicted – the burdens have become neither fewer nor lighter. Nevertheless, it feels good to be in a position where I feel I am able to face new challenges in life, pursue new ideas in my research, and where I can afford myself the luxury of taking a breath every once in a while.

The focus of this study on fertility choices and labour market participation across welfare states has led to what the inclined reader hopefully perceives as some interesting results. My ongoing confrontation with this topic has left me with many ideas for future research, and I could probably spend the next several years on little else. The future will show whether I will stick to these ideas or pursue new paths. Regardless of where the focus will rest, I am looking forward to future collaboration with friends and colleagues, many of whom have already supported me in the endeavour of writing this dissertation. Several have shown a great deal of patience, enduring my endless questions, and others kept pushing me to investigate issues that eventually turned out to pave the proper paths for my work. Hence, it does not come as a surprise that this thesis is also the product of inspiration provided by good friends, and by the generous and competent support I received from many colleagues.

I am particularly indebted to my supervisor, Martin Diewald: not only for always having an open ear for my questions, but also for spending many Friday afternoons in lively discussion and patient guidance and for providing me with numerous ideas that ultimately helped me attain a clear vision for this study. Furthermore, I am grateful to him for ensuring that the disputation could take place only a few weeks after I had submitted the thesis. Finally, Martin's quick response allowed me to adhere to my deadlines within a very tight time schedule. Fortunately, I found in Jost Reinecke another competent, supportive, and benevolent supervisor. He offered me the opportunity to present part of my work in one of his seminars and provided me with a broad array of very helpful comments and suggestions of what I could improve in

the final version of the thesis. In particular, however, I am grateful to both of them for working through a total of more than 300 pages at a time when work was already towering on their desks and planned summer vacation was close. I can imagine that what one would usually want as vacation reading would be a bit more entertaining than what I offered them.

Among the many friends and colleagues who supported me, I want to thank Elke Holst and Martin Kroh in particular. They always took their time for support, for discussion, reading through drafts, and perhaps most importantly, they encouraged me constantly in the process of writing this dissertation. In addition to these two friends, I want to mention a few other people who helped me – either continuously or in special stages of my work, or who simply set me on the right track even before starting with my thesis. In this sense, I owe much to Marina Rupp and Rottraut Oberndorfer at the ifb in Bamberg who guided my first steps in academic life and who gave me the impression that this profession is also a rewarding and a personally fulfilling activity.

My next stage in my academic career took me to the SOEP in Berlin, with which I am still affiliated. In the SOEP, I found an inspiring research environment that has allowed me to develop my own research interests. Most importantly however, the SOEP offered me a place where I could feel comfortable among a group of helpful and supportive colleagues. In particular, I thank Joachim Frick and Martin Spieß for the advice they gave me, especially in the early stages of my dissertation. At that time – thanks to John Haisken DeNew – I found out that even small suggestions can be tremendously helpful: after a presentation of an initial outline of my thesis, which was admittedly quite crude and undirected, John pointed out to me how to develop a complex project on the basis of a few simple but pointed research questions. It was then that I abandoned the idea of explaining a multitude of complex phenomena, and instead chose to focus solely on the transition to first birth, which was perhaps one of the most central and also most fortunate turning points for the study you are hopefully about to read. Moreover, I thank Gert G. Wagner for always offering me a safe harbour at the SOEP where I could develop and finally finish my dissertation, and – perhaps even more importantly – I thank him for encouraging me to make the steps and choices in my professional career that I would otherwise have been quite reluctant to make.

Finally, I am grateful for the support and backing I received from my colleagues at the Institute of Sociology and Demography at the University of Rostock. Among them I am particu-

larly indebted to Heike Trappe, not only for offering her competent advice, for reading through endless drafts and last but not least for instilling in me the confidence that this thesis would finally see the light of day. Most importantly however, I have to thank her for taking work off my shoulders when I should have taken work off hers.

There are a few more colleagues who helped me particularly in the final stages of writing this thesis and they should not go unmentioned. I thank Michaela Engelmann for the effort she put into getting the final copies ready for print and for solving some simple and some not so simple problems in that process. I am especially grateful to Deborah Anne Bowen and Jennifer Reed Dillon. They have not only succeeded in polishing my English but have also done a formidable job of enriching the language of this thesis with their thorough understanding of scientific writing, and supported me continuously, even under quite restrictive time schedules.

Finally, this work has certainly gained from the ones I spend much of my limited leisure time with and whose comfort and inspiration made returning to the desk not necessarily more welcoming but certainly a more productive endeavour. In that sense I owe a lot to Lilly and particularly to Angi, not only for enduring my moods but also for constantly cheering me up. Furthermore, I thank my family, in particular Irene, Manfred, Helga, and Kurt, not only for providing me with constant support but also for imprinting me with the deep notion that I am capable of reaching my goals in life.

Returning the focus to the contents of this volume, the contribution at hand certainly does not provide a full-fledged overview of the causes of low fertility. To date, the research on fertility has created an impressive body of findings. Nevertheless, the remaining gaps in the research on fertility are closer to black holes than to tiny blind spots. My humble goal was that in writing this thesis I might narrow some of these gaps just a little. I will leave it to the inclined reader to judge whether I have succeeded in this aim. I hope the findings justify not only my effort but also the trust and support of my colleagues, family, and friends that helped me along the way.

Berlin in March 2009

Table of Contents

List of Figures

List of Tables

Chapter One

Introduction

"Explain all that," said Mock Turtle to Alice. "No, no! The adventures first," said the Gryphon in an impatient tone: "explanations take such a dreadful time."

Lewis Carrol, Alice's Adventures in Wonderland

Low Fertility as a 21st Century Crisis?

The last decades have witnessed the emergence of unprecedented patterns of low fertility. Until recently, this demographic process was assumed a temporary decline that would be succeeded by an eventual recovery of birth rates[1]. Instead, these patterns of lowest-low fertility have stabilized. Research into the causes of this development has produced a wide variety of theoretical approaches. Yet, although the topic has gained a great deal of public as well as scholarly attention, a unifying framework for understanding and explaining low fertility is still lacking. What lies beyond doubt is that this development is linked to a series of cultural and socio-economic phenomena that emerged in different post-agrarian societies during the 1960s and 1970s. These included the widespread availability of effective contraceptives, the increasing educational attainment of women, and particularly the increased female labour force participation. The impact of changing values and beliefs has been a central element of social change leading to fertility decline. The weakening of normative bonds has promoted the pursuit of life paths that compete with family formation over scarce resources, particularly monetary resources, and time – both in everyday life and across the life course.

The consequences of these developments have led to sustained levels of below-replacement fertility. Additionally, medical advances continue to extend life spans. Combined, the decline in both mortality and fertility culminates in the rapid aging of societies and adverse shifts in

age structure (see United Nations Population Division 2006). This undermines the "…solvency of programs for the old" (Morgan 2003: 589) in particular, and threatens the stability of social security systems in general (see Bongaarts 2002: 420). As a response, many of the post-transitional countries have adjusted their immigration policies to mitigate population decline. But for countries under the impact of lowest-low fertility regimes, immigration currently only offers a means to *slow down* population decline (see Mertins 1997: 17).

Some authors argue that low fertility should be countered by pro-natalist policies (e.g., Schwarz 2007). Such proposals raise concerns as to whether the state should interfere in domains of life that are as private and as consequential as fertility decisions. Indeed, the issue of low fertility has spawned a broad public discussion that goes far beyond concerns regarding the sustainability of public pension systems. Many of the participants in this discussion see below-replacement fertility as a manifestation of inevitable and dangerous societal decline (for an overview see Bumpass 1990: 493). Positions range from the notion of low fertility and increasing childlessness as a disintegrative element in society to the idea that it represents a lack of social solidarity. The same sceptics that reject pro-immigration policies also perceive fertility decline as a national threat, and the rhetoric of national extinction flares up with alarming regularity in the public debate. Paradoxically, the idea that an aging population threatens society is often accompanied by the perception that increasing life spans and the prospects of reaching an advanced age are individual blessings and indications of social progress. Perhaps the most common concern raised is that childlessness is a manifestation of declining traditional values in general and spreading egocentrism, hedonism, and social ruthlessness in particular. The blame for this development is often placed on women.

> "In the past, descriptions of women as selfish or unwilling to do their national duty were a common response to falling fertility. This response was incorrect then, and is now actually counter-productive because it is divisive and because it reduces the policy debate to a trivial level easily lampooned in the popular press. […] In Japan, young people who delay marriage and childbearing are frequently described in the media as 'parasite singles' and in Austria, a government minister has called upon women to fulfil their national duty of reproduction." (McDonald 2002: 427).

---

[1] Before 1998, United Nations population forecasts generally assumed such a recovery for industrialized countries.

The common trait of these arguments is their preference for simple explanations over complex ones. They reduce the issue to rampant egoism and selfishness rather than to the result of contradictions between legitimate individual desires and aspirations, which result in part from value change, and the prevailing traditionalism of social institutions.

The fact that the desired number of children in most industrialized countries still lies well above replacement levels (see Bongaarts 2001; 2002; Huinink 2001b: 6) is undoubtedly just a small part of the overall picture, but it reveals that the simple explanations mentioned above are misplaced and misleading to say the least. Nevertheless, the heralds of population decline are omnipresent in the public debate and they usually agree on the point that this problem will be one of the key crises of the 21st century. Proponents of this idea highlight the array of fears associated with population decline as in Patrick Buchanans *Death of the West* (2002, subtitle: *How Dying Populations and Immigrant Invasions Imperil Our Country and Civilization*), or Frank Schirrmacher's *Methusalem Komplott* (2004). Ironically, it was not too long ago that population *growth* was perceived as one of the most pressing problems of the 20th century. Meanwhile, the rapid population growth still underway in developing countries – with numerous associated problems ranging from famines to severe shortcomings in educational systems and economic development – are predicted to level out slightly above the replacement level by the middle of this century (see United Nations 2007b: 11).

Still, massive population decline is a serious matter, and the industrialized countries differ in the extent to which they are affected. Yet, Philip S. Morgan describes low fertility as a "second-order twenty-first-century problem" (2003: 600). He stresses two – to my mind crucial – facts that classify the issues associated with low fertility, which he calls *problems one would like to have*[2]: "First, these problems [of population decline] result from solving some bigger, more troublesome challenge. Second, these problems have solutions and befall those with the resources to solve them." (2003: 599f.). The view of low fertility as a social crisis has also been challenged by other authors who suggest that the problems of population decline and aging are balanced out by new opportunities that arise from these changes (see for exam-

[2] This is also a direct reference to countries that still face rapidly expanding populations and thus much more severe problems, while – in contrast to industrialized nations – essentially lacking the resources to cope with these issues.

ple Hondrich 2007). An interesting discussion of pros and cons of fertility decline, also addressing the topic of pro-natalist policies, is provided by van de Kaa (1987: 46ff.).

In fact, the causes for low fertility are complex and have only been partially explored in the previous research. Three central issues offer starting points for a more in-depth discussion of the topic: 1) Fertility decline has emerged as a new form of ongoing social change rather than as an existential 21st century crisis. 2) Nevertheless, population decline and increasing childlessness have far-reaching implications that go beyond the threat to social security systems. The fact that the desire for children in virtually all countries lies well above actual fertility levels (see, for example, Goldstein, Lutz & Testa 2003) highlights the increasing difficulties in combining parenthood with other areas of life – especially with the demands of work. Trivial explanations of egoism and selfishness tend to obscure this fundamental incompatibility between the institutional and structural context and people's individual life goals (see also McDonald 2000). It is crucial that policy makers and those involved in the public debate carefully consider the causes of low fertility in order to adequately address these complex problems. 3) We need a better understanding of how structural and institutional contexts and individual choices interact to cause declining fertility and increasing childlessness. This is a central task for current and future research agendas.

Outline of a Theoretical and Empirical Framework for the Analysis of Fertility Decisions

The aim of this work is to provide a differentiated view of the factors that drive *first-birth decisions.* For this purpose, I will develop a theoretical framework of fertility behaviour and apply the concepts derived in two case studies focusing on first-birth choices in a cross-national comparative perspective. At the heart of this procedure lies the idea that the fertility dynamics seen in aggregated patterns result from a multitude of plans and decisions based on inter-individually differing psycho-social and biographical backgrounds, and varying social influences and situational contexts. In most cases, parenthood results from rational consideration in the context of the institutional and social (structural) environment, given individual resources and constraints. In some cases of unplanned births, the transition to birth takes place without any deliberate choice (for a discussion, see Section 4.1). A pure macro-level perspective however neglects such complex micro-level processes. It must fail by design as it is incapable of causally understanding how the underlying mechanisms of individual fertility behaviour translate into aggregate patterns (see Boudon 1986; Huinink 2001b).

The task of analysing fertility includes the investigation of the constraints under which to-be parents choose to have a child and the conditions under which they postpone or generally reject such a choice. Such a perspective is rooted in micro-level factors, as fertility is a consequence of individual choices and behaviour. These choices are made not in a social void but in a complex social environment: fertility decisions are driven by expectations and formulated within a social context that includes reference groups, networks of kinship, and most importantly, one's partner. These choices are embedded in the structural and institutional framework that shapes not only individual *choices*, but also available *options* and the relative costs of the path one chooses to go. In this context, the opportunity structure is shaped fundamentally by the constraints of the partner market, the educational system, the labour market in particular, and more generally, the welfare state.

A cross-national perspective on fertility behaviour can help unravel the complex patterns of differential effects that the structural, institutional, and cultural-normative context exerts on fertility behaviour. Cross-national variation will thus play a vital role in the study at hand – not least, because cross-national variations in fertility coincide with certain patterns in the cultural, structural, and institutional framework. There is distinct evidence that specific welfare state orientations play a decisive role in reproducing either traditional or egalitarian divisions of roles between men and women. These roles pertain to the gender division of labour both within the home and between household work and gainful employment.

Having a child goes hand in hand with drastic changes in living conditions. Yet, the burdens involved in childbearing and childrearing are mainly borne by women. This in turn hampers women's labour market involvement. Cataloguing how parenthood affects men and women differently, especially with respect to labour market participation, has become an almost trivial point. Nevertheless, for any analysis of fertility, it is crucially important to understand how the triad of gender relations, labour market attachment, and welfare state influence (affecting social position, labour market access, and the burden on women) affects childbearing decisions.

This multi-level framework will form the theoretical and analytical foundation of the contribution at hand. Importantly, all childbearing decisions will be considered here from the viewpoint of action theory – not only from a situational but also from a life course perspective of intentional and planned behaviour. There is important evidence that the increasing post-

ponement of parenthood to more advanced ages in industrial countries is the consequence of deliberate planning. Institutional environments and individual rationales suggest that people place high priority on ensuring their economic security by staying in the labour force and delaying severe and irreversible transitions such as the decision to start a family. An analytical framework capable of investigating fertility rationales needs to take these issues into account.

Brewster and Rindfuss specify that "…such a framework must have at least three features; it must be dynamic; it must recognize the multi-dimensionality of both labor force participation and fertility; and it must be multilevel, incorporating the institutional and normative arrangements that influence individual fertility and labor force behavior." (Brewster & Rindfuss 2000: 291). I argue that in addition to those elements stressed by Brewster and Rindfuss, a cross-national perspective is crucial in differentiating the various impacts of specific national patterns that emerge from structural, institutional, and cultural-normative factors.

The contribution at hand will focus theoretically as well as empirically on the transitions to first-births. This follows the notion that starting a family involves a fundamental life course change. Central choices culminate at this transition: which life-paths to take in the future, whether to invest further in career opportunities or focus instead on a homemaker role, and more generally, whether one's relationship and life plans are compatible with parenthood. The irreversibility and momentousness of the choice to have a child also applies when deciding whether to have more children later. Yet, the initial transition to parenthood and the far-reaching consequences of this decision only apply to the first child. Hence, it is likely that people ponder this decision particularly carefully. In this contribution, the term first-birth transition is used synonymously with the transition to parenthood, family formation, and starting a family.

Contents of this Contribution

This thesis is divided into six chapters. While Chapters 1 to 4 aim at outlining the empirical background and the theoretical foundations in order to address the transition to parenthood as central indicator of fertility behaviour, Chapters 5 & 6 will provide cross-national comparative case studies of first-birth transitions in the context of labour market participation.

Following this introductory chapter, Chapter 2 aims to provide the reader with a general overview of patterns of low fertility in industrialized countries. The focus lies on describing

central indicators and structural components, including birth timing, birth-parities, and the prevalence of childlessness, as well as a general view of the link between educational systems and labour markets and fertility. Chapter 3 will outline different classifications of welfare state regimes as a framework for a cross-national analysis. This chapter will also outline basic differences among social policies and cultural norms relevant to fertility across various countries. Chapter 4 will turn to the microfoundations of fertility behaviour and focus on modelling the individual decision for the first child in the life course. The foundations of this micro-theoretical model rest on a theory of rational action that takes into account the emergence and realization of fertility plans over time and especially within the life course. Chapter 4 concludes the theoretical model of a cross-national comparative analysis of individual first-birth transitions.

This model will then be applied to two separate empirical analyses, presented in Chapters 5 & 6. These investigations all operate at the intersection of labour market behaviour and fertility decisions and focus on gender differences in related choice situations. All models employ longitudinal data in a cross-national comparative perspective. It should be stressed that the empirical data at my disposal only allows for a limited implementation of the various claims derived from the theoretical model. Caveats aside, the data applied ranks among the most refined quantitative survey data currently at the disposal of cross-national and longitudinal research.

In Chapter 5, I will conduct an empirical analysis of the impact of labour market insecurities and especially of unemployment on the propensity for first birth transitions. This model employs data from the European Community Household Panel (ECHP) from 1994 to 2001 and compares Finland, France, Germany, and the UK. The final analysis in Chapter 6 investigates the role of labour market entry and initial occupational performance for the decision to start a family. In brief, I will address how closely these two key transitions in life courses are interconnected. In this context, I will pay special attention to the impact of labour market integration and precarious employment. The investigation is based on a cross-national comparison of Germany and the UK using data from the Socio-Economic Panel Study (GSOEP) and the British Household Panel Study (BHPS) from 1992 to 2004.

Chapter Two

Background –

Patterns of Low Fertility in Industrialized Countries[3]

This chapter will provide the reader with a general overview of the background of low fertility regimes in industrialized countries. I will start by tracing the emergence of low fertility in these regions (Section 2.1), and will then critically discuss the suitability of the various indicators used to measure both aggregate fertility and the structural determinants of childbearing behaviour, including timing and quantum of births across countries. It should be noted, however, that the focus here is on the transition to parenthood, i.e., first births. While I will briefly shift focus by providing an overview of general patterns of low fertility, this will serve to highlight the pronounced role of *delayed* first-birth transitions in the process of fertility decline.

Section 2.2 will complete the background picture of low fertility in post-transitional societies by presenting *structural* and *institutional* contexts. In detail, I will focus on crucial changes, key developments, and the current situation in the educational system (2.2.1), on the labour market (2.2.2), and on how these developments relate to ideational shifts and the gender division of labour (2.2.3). Section 2.2 however, does *not* focus on elaborating causal mechanisms or on outlining codes of orientation by which labour markets or gender norms, e.g., influence fertility behaviour. This perspective will be addressed in Chapter 3.

---

[3] Note that throughout this background section, all data cited for Germany before 1991 applies to West Germany only, while the data for the United Kingdom includes England, Northern Ireland, Scotland, and Wales. This rule applies throughout this study except where explicitly specified.

2.1 Facing the Facts – Low Fertility in Industrialized Countries

The aim of this section is to develop a concise picture of the emergence of low fertility in industrialized countries. This is done in order to highlight the extent to which various countries are confronted with problems of low fertility and the extent to which different countries have managed to recover from low fertility. Major attention will be paid to commonly applied fertility indicators (2.1.2) and some of their limitations (2.1.3). Also crucial for understanding fertility decline is the increasing postponement of births (2.1.4) and its impact on family size. In this context, the delay of first-birth transition emerges as a key issue in the context of family size and thus overall fertility, as this timing determines the time span left for having additional children. The increasing delay of the transition to parenthood also turns out to be closely related to the percentage of the population remaining permanently childless (2.1.6). The negative impact of first birth postponement on the realization of fertility goals is further underscored by the fact that desired family sizes well exceed the average number of children in several countries (2.1.5). Section 2.1.7 will discuss the question of whether low and especially lowest-low fertility can be seen as a relatively temporary pattern in industrialized countries or whether the related fertility behaviour has already solidified to become a persistent pattern.

This section starts out with an initial view on demographic transition theory (2.1.1) that offers a macro-level perspective on fertility decline. Rather than providing a theoretical framework, referring to demographic transition theory will serve to highlight some key determinants and to provide insights into a number of commonalities in the decline of fertility across countries that will be addressed throughout Section 2.1. Furthermore, the examination of these theories will also serve to stress the necessity of a micro-analytical grounding for the investigation of fertility behaviour already discussed in the introduction. This also will allow distinguishing the pronounced role of first-birth transitions, which is the key focus of this study.

2.1.1 A Brief Sketch of Macro-Level Theories of Fertility[4]

Already in the 18th century, population dynamics in industrialised countries were severely affected by socio-economic change. Preceding the Malthusian era of high birth rates and high mortality, the 19th century witnessed a progression from mortality decline to fertility decline. The driving forces behind this development, summarized in the theory of the first demographic transition (FDT), can be traced to industrialization, urbanization, and secularization in general. In particular, medical and hygienic advances that reduced mortality, the emergence of extra-familial production, and old-age security programs turned children from economic contributors to recipients, thus decreasing the ratio of family expansion (see Caldwell 1982). While the onset of mortality decline initially caused a massive population expansion, this development eventually converged with declining fertility, leading to slow but steady population growth in industrialized countries. Seminal contributions on the issue of first demographic transition theory have been provided by Notestein 1945, Mackenroth 1953, and Coale & Cotts Wattkins 1986 (for an overview see Kirk 1996).

Although these effects of socio-economic circumstances on population dynamics have been studied thoroughly, the remarkable decline in fertility rates during the 1960s and the last few decades of the 20th century occurred completely unpredicted. The scholarly response to this fertility decline was a series of theories aimed at unravelling its origins. Certainly the most well-known of these is the theory of the second demographic transition (SDT)[5], originally introduced by Ron Lesthaeghe and Dirk van de Kaa (1986). This concept is based on the observation that the onset of fertility decline coincided with a series of social and economic changes. Here, value shifts form the most important driving force behind the secular decline in fertility, whereby individuality and self-fulfilment increased in importance, introducing competing alternatives to family formation throughout the life course (see Lesthaeghe & Surkyn 2006). This weakened norms that previously had restricted sexuality and parenthood

---

[4] Broader overviews on the theoretical framework are provided by Hill & Kopp (2000) and Huinink (2000).

[5] Second demographic transition theory was developed to overcome limitations of a theoretical predecessor: according to the economically based Easterlin hypothesis (1962; 1966), fertility is subject to long-term cyclical movements affected by the economic opportunities of the different generations within a society. The hypothesis assumes that these opportunities – for instance, on the labour market – depend on the relative cohort size: If cohorts are large, so is the competition in that particular generation. Low fertility is thus a direct consequence

to the institution of marriage, while the availability of effective oral contraceptives offered the technical means to separate sexuality from parenthood (see Potts 1997). Furthermore, ideational aspects of relationships became more important, while the institutional bonds of marriage were weakened. The consequence was a decrease in the stability of marital unions, which contributed to declining fertility levels (see van de Kaa 2002: 15f. & 25f.). These developments were also closely related to the fact that women were gaining ground in education and on the labour market. Yet, the gender division of domestic labour remained widely traditional, increasing the overall burdens of motherhood.

The concept of the second demographic transition has been challenged for a series of conceptual discrepancies with empirical observations, namely the prevalence of the phenomena in North-West Europe. Furthermore, there exist a number of widely differing low-fertility regimes in Europe, and the SDT theoretical framework is widely incapable of explaining their cross-national and regional variance. Similar critique has also been directed at the first demographic transition theory, given that the regional variation in fertility patterns does not generally comply with the conditions for fertility decline specified there. However, in contrast to FDT, SDT also remains mute about predictions of an endpoint equilibrium or about conditions for a recovery to near or above-replacement fertility levels. Generally, SDT's claim as a fully fledged theory has been challenged, and it has been classified as a merely theoretical concept (for a general overview of the critiques, see Cliquet 1991 or Coleman 2004).

The substantial critique outlined above gets to the heart of the general shortcomings of macro-level approaches in explaining fertility patterns. They all share a fundamental inability to comprehend the mechanisms driving fertility behaviour since they are not concerned with individual behaviour or individual responses to social change – aside from generalized patterns. As a result, these theories leave opaque the connections between institutional context at the macro level and fertility behaviour at the micro level (see Hammel 1990: 464). Aggregate-level theories share this inability to predict developments based on a causal understanding or to specify conditions for a recovery from low fertility. To develop a framework dedicated to a cross-national comparison, generalised macro-level theories are inadequate as they are unable to capture the multitude of facets through which national particularities affect fertility behav-

---

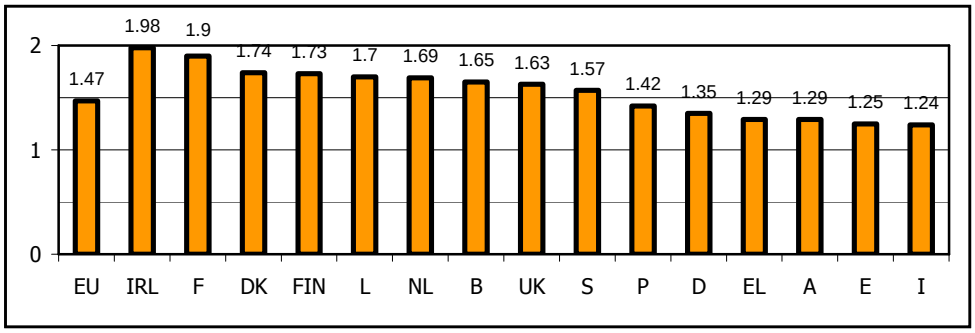
of bleak economic prospects. A summary of critiques of the Easterlin hypothesis can be found in Oppenheimer

iour in a specific way. Instead, they tend to level and thus ignore valuable information in cross-country heterogeneity (see Kohler & Ortega 2002: 146).

Caveats aside, SDT provides important indications of the central factors driving fertility behaviour. Crucial among these are female educational participation, gender roles, and especially female labour market attachment. Though SDT fails to integrate these fields satisfactorily into a unifying framework, there is much evidence that they are crucial to the understanding of fertility decline. Thus, the structural and institutional components highlighted by SDT – including the state of the education system, the situation on the labour market, and changes in value orientations, particularly regarding differential male and female roles – will be addressed in Section 2.2. The individual-level impacts of these factors will be considered from a theoretical standpoint in Chapter 4, and in the empirical investigations in Chapters 5 & 6.

2.1.2 Fertility Decline in the Second Demographic Transition – From Baby Boom to Baby Bust

Figure 1: Total Fertility Rates (TFR) in Selected European Countries 2001



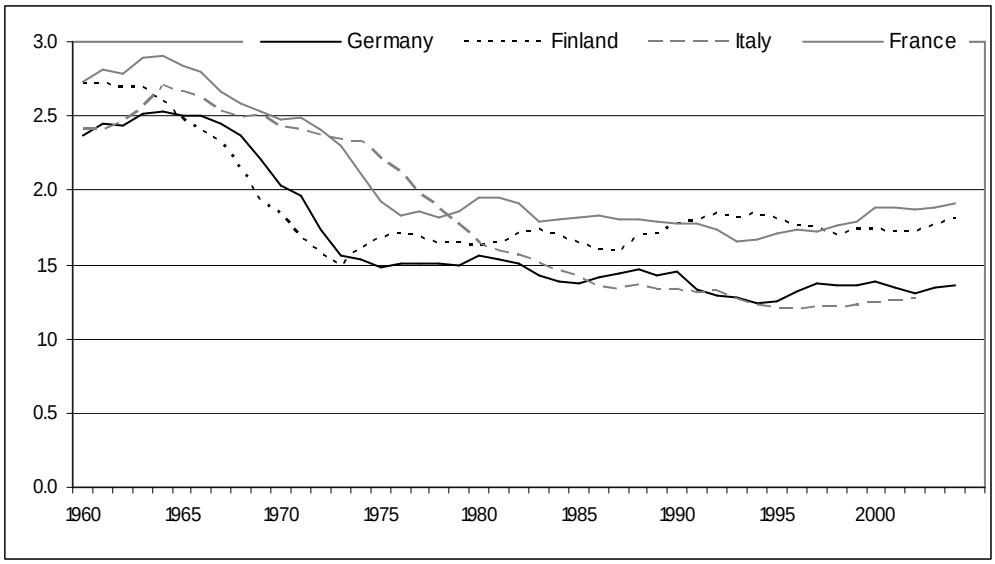
Source: European Communities 2003.

Present-day fertility differs among the industrialized countries that have undergone the changes in the SDT outlined above. These have been leading to lowest-low fertility levels in a number of countries, particularly in Europe. The following depiction of descriptive evidence on aggregate fertility patterns is intended to provide an initial impression of cross-national differences that reflect the overall consequences of delayed or forgone parenthood, based on standardised and thus comparable measures. Nevertheless, it should be noted again that ag-

(1994) and Pampel & Peters (1995).

gregate indicators are incapable of providing a causal understanding of what drives cross-national differences given the multifaceted nature of individual fertility choices. The goal here is solely to provide a rough sketch of fertility patterns that will be refined later with a focus on individual fertility behaviour. In examining how low fertility has evolved, it is valuable to take a closer look at the fertility transition of the last few decades.

Figure 2: Total Fertility Rates (TFR) in Selected European Countries 1960 – 2004



Source: Council of Europe 2006, database: European Demographic Observatory

Initially, the period following the Second World War was characterized by fertility levels that were well above replacement levels. During the 1950s, the total fertility rate (TFR) in Canada and the US reached almost four births per reproductive age female. At that time, most European countries, including France, Finland, and West Germany, showed TFRs that were around 2.5 (see Table 1), and hence also well above the replacement level. The onset of fertility decline occurred between the mid-1960s and mid-1970s. During that period, most developed countries underwent a drastic change, characterised by rapidly declining fertility compressed into a surprisingly narrow time frame of less than half a decade in some cases[6]. (For a general overview, see Bongaarts 2002). Subsequent to the fertility decline, the TFR remained on a low level in most countries. Although some up- and downward variations can be observed,

[6] For some developed countries, the onset of fertility decline occurred later. The reasons differ but are attributed to a delay in changing values (Italy), delayed economic development (South Korea), and the impacts of political and economic regime change in the Eastern Block (Czech Republic; see Sobotka 2004).

there is no unambiguous trend. A number of countries have now managed to recover to near or even above-replacement fertility levels. Comparatively high rates can be found in the Scandinavian countries and France and some of the anglophone countries, including the US and Ireland (see Fahey 2001). In contrast, fertility decline in some developed countries, especially in Southern and Eastern Europe has progressed to levels of lowest-low fertility.

Lowest-low fertility rates apply to cases of a total fertility rate (TFR) at or below 1.3 (see Kohler, 2002). Such patterns are often closely associated with a drastic decline in family size and a high prevalence of childlessness. If a society sustains this rate over a longer period, problems associated with population decline and adverse shifts in age structure are consolidated[7]. Countries under lowest-low fertility regimes include Southern European nations like Italy, Spain, and Greece, and also Central and Eastern European countries like Germany and Russia. At the end of the 1990s, the population, living in European countries under lowest-low fertility regimes exceeded 370 million (Kohler, Billari & Ortega 2002: 641). The common background that these lowest-low fertility regimes share, is a significant delay in family formation bolstered by economic and social changes, social in-

The **Total Fertility Rate (TFR)** is a measure, based on all births of women in their fertile life span (ages 15 to 45), observed in a fixed period t (usually a calendar year). It displays the number of births per woman of a given age, in dependence of the total number of women of that age $b(t; x)$. This static perspective assumes that the aggregated patterns of incidence of births at different ages are representative of individual *lifetime* fertility behaviour. That is, observed annual fertility in (t) is implicitly projected onto lifetime fertility.

$$\text{TFR}(t) = \sum_{45}^{15} b\,(t; x) \qquad (1)$$

Replacement Fertility describes the minimum TFR, required ceteris paribus, to maintain a stationary population. In developed countries, the replacement rate is set at 2.08 children, which is composed of two children, as parental reproduction and another 0.08 to account for female mortality before the end of the fertile phase.

[7] Kohler and colleagues note that „a TFR of 1.3 [...] implies a reduction of the birth cohort by 50 percent and a halving of the stable population size every 45 years" (2002: 642).

teraction processes,[8] and institutional settings (ibid. 2002: 652ff.). The impact of birth postponement on the measured total fertility is twofold: first, the delay in births is likely to have a negative quantum effect by diminishing the number of births of higher parity, and second, if births are generally delayed, this temporarily decreases the static TFR indicator as a result of this tempo effect (see Lesthaeghe & Willems 1999).

Table 1: An Overview of Fertility Rates in Selected Countries

	TFR >2.1	TFR >1.5	TFR >1.3	Highest TFR	Lowest TFR	TFR 2004[1)]	CFR 1960[2)]
South Korea	1983	1998	2001	6.00 (1960)	1.30 (2001)	1.30 (2001)	n.a.
Japan	1957	1993	2003	3.64 (1950)	1.29 (2003)	1.29 (2003)	1.82
Australia	1976	.	.	3.54 (1961)	1.73 (2001)	1.76 (2003)	2.15
Canada	1972	2000	.	3.84 (1959)	1.49 (2000)	1.50 (2002)	1.83
US	1972	.	.	3.70 (1957)	1.77 (1976)	2.01 (2002)	2.02
UK[3)]	1973	.	.	2.95 (1964)	1.63 (2001)	1.63	1.97
Czech Rep.	1966	1994	1995	2.43 (1974)	1.13 (1999)	1.22	2.03
Russian Fed.	1989	1993	1996	2.19 (1986)	1.17 (1999)	1.33	1.83
Finland	1968	.	.	3.16 (1950)	1.50 (1973)	1.80	1.96
Sweden	1968	1999	.	2.47 (1964)	1.50 (1999)	1.75	2.04
France	1975	.	.	2.90 (1950)	1.65 (1994)	1.91	2.11
East Germany[2)]	1972	1991	1991	2.53 (1963)	0.77 (1994)	1.06 (2002)	1.80
West Germany[2)]	1970	1975	1985	2.53 (1964)	1.30 (1985)	1.35 (2002)	1.60
Italy	1976	1984	1993	2.61 (1964)	1.19 (1995)	1.33	1.67

Sources: United Nations 2007a; [1)] Council of Europe 2006; [2)] Sardon & Robertson 2004; [3)] Statistics UK 2007 for TFRs 1960 to 1981; database for [1)] and [2)]: European Demographic Observatory.

2.1.3 Tempo & Quantum Effects

Summarizing the above, the postponement of births plays a pronounced role in the decline of fertility. The commonly used TFR treats observed annual fertility as lifetime fertility. This projection offers the advantage of immediately displaying birth-rate responses to social or

[8] The role of social norms of ideal family size and the role of kinship groups as exchange networks affecting fertility was originally examined by Leibenstein (1974; 1975).

economic change. This indicator, however, incorporates a severe bias as fertility behaviour throughout the individual life course is not taken into consideration. Thus, if the mean age at childbearing increases (i.e., childbearing is delayed compared to the status quo in t_0), the decline in period fertility appears to be more drastic than completed fertility would suggest (for a general overview, see Ryder 1983).

The **Cohort Fertility Rate (CFR)** measures lifetime fertility at the end of fecundity of women of a given birth cohort t_b. Cohort fertility requires the reproductive phase to be completed and is unaffected by temporary social or behavioural changes that do not affect fertility levels permanently. Accordingly, this indicator remains unaffected by tempo effects unless they exert an impact on fertility quantum.

$$CFR\ (t_b) = \sum_{45}^{15} b\ (t_b + x;\ x) \qquad (2)$$

The static TFR is incapable of capturing temporal effects that occur within life courses like birth delays or a recuperation of postponed fertility at higher ages. Accordingly, birth postponement manifests itself as a decline in birth rates, thus underestimating lifetime fertility[9]. A quantification of the tempo effect in various developed countries is provided by Bongaarts (2002: 432ff.) His findings suggest that TFRs are on average 0.2 higher if they are adjusted for the tempo effect. The magnitude of the effect increases in countries that have experienced a steep increase in the mean age at birth, i.e., where the tempo effect caused stronger distortions of the TFR. In agreement with this finding, Lesthaege & Willems (1999) suggest that total fertility would recover if the continued delay of childbearing stopped. However, "…a mere halt to further postponement of childbearing would, in the large majority of EU countries, fail to restore period total fertility rates to the neighbourhood of replacement-level fertility" (Lesthaeghe & Willems 1999: 221; for an in-depth discussion of this topic see also Bongaarts & Feeney 1998).

In contrast, a recovery of fertility rates at or above the replacement level requires either an inverse tempo effect, decreasing the mean age at birth, or a quantum effect increasing birth parities or – even better – a combination of both. However, current developments do not point

[9] For an in-depth analysis of this tempo effect see, e.g., Bongaarts & Feeney (1998), Bongaarts (1999b) Lesthaeghe & Willems (1999), Kim & Schoen (2000), Lesthaeghe & Moors (2000) or Kohler & Ortega (2002).

either in the direction of a reversal of birth postponement or in the direction of a recovery from low parities. In contrast, the mean age at birth is tending to increase even further (see Figure 3, p. 19). Lesthaeghe & Willems (1999) suggest that women's self-confrontation with their biologically limited fertility spans, will eventually curb the tempo effect. That is, to-be-parents will realize that they cannot delay fertility desires indefinitely. This consideration emphasizes that the tempo effect is a temporary phenomenon: The negative impact of birth postponement on TFR will disappear once the delay in childbirth is suspended. Such a recuperation effect was observed in the US in the late 1980s, for instance (Bongaarts 2002: 437).

Table 2: Cohort and Period Fertility Indicators by Country

	CFR 1940	CFR 1950	CFR 1960	TFR 1970	TFR 1980	TFR 1990
US	2.68	2.01	2.02	2.48	1.83	2.08
UK	2.35	2.06	1.97	2.40	1.88	1.84
Finland	2.04	1.86	1.96	1.83	1.63	1.78
West Germany	1.97	1.69	1.60	1.99	1.45	1.45
Italy	2.14	1.89	1.66	2.43	1.64	1.33

Source: Sardon & Robertson 2004.

In that context, cohort fertility provides a solid measure of mid- to long-term fertility trends. A common finding in developed countries undergoing demographic transition is that CFR commonly exceeds the corresponding TFR[10]. This difference is a consequence of both the tempo effect and increasing birth postponement, which consolidate in the TFR measure (see Bongaarts 2002: 421ff.).

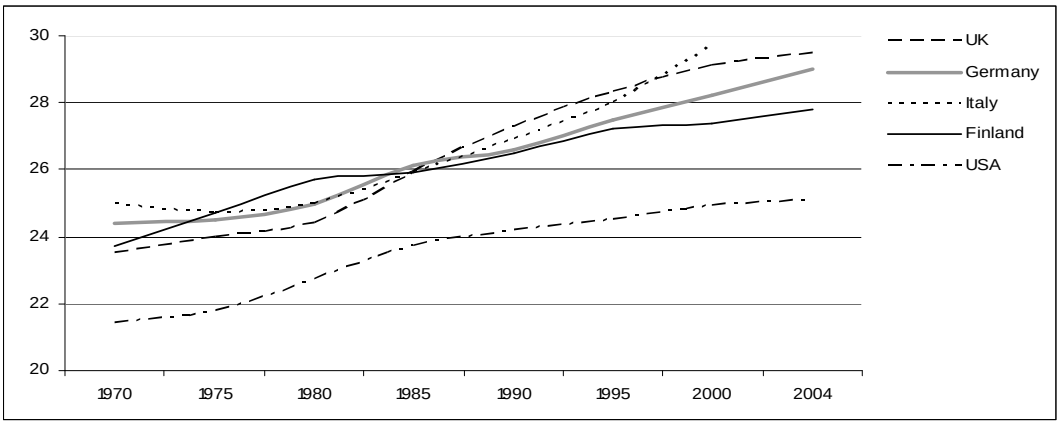
2.1.4 The Role of Delayed Family Formation

The idea that fertility rates will eventually recover from the tempo effect assumes that those who delay childbearing will "catch up" by having children at higher ages. However, fertility postponement diminishes the time span left for childbearing, which makes it difficult to have the desired number of children and will probably increase the number of couples that remain

[10] Note that comparability between cohort- and total fertility rates is generally limited as CFR and TFR relate to different observation periods and different populations. In table 2 the TFRs were chosen for the years in which the corresponding cohorts had a high propensity of birth transitions.

permanently childless (see Dorbritz 1998: 202f.) Simultaneously this negatively affects family size by diminishing higher-order births. This central conclusion of an interrelation between tempo and quantum effects has been highlighted in a number of different studies (see, e.g., Morgan & Rindfuss 1999; Kohler et al. 2002: 646, and Kohler & Ortega 2002).

Figure 3: Mean Age at First Birth 1975 – 2005 by Country



Sources: Council of Europe 2006; values for the US taken from Mathews & Hamilton 2002; values for Finland and the UK. up to 1980 taken from Beets 1999.

Notes: 1) Values for Germany and the UK represent birth-order within current marriage.
2) Latest value for Italy refers to 1997 (28.7); latest values for Finland and the UK refer to 2003.

A rough indicator of birth postponement is the mean age at birth of a child of a given parity. The mean age at *first* birth is a crucial indicator, as it dictates the time span generally left to realize fertility intentions beyond having a single child. Figure 3 shows the increase in mean age at first birth as a unceasing effect. This trend of fertility postponement is common to almost all post-transitional countries. The negative impact of the inclining mean age at birth on fertility is also reflected in cohort fertility rates. Countries with high birth postponement, such as Germany and Italy, show continuously declining cohort fertility. The United States present a stark contrast to these trends: there, the mean age at first birth rose very slowly between 1980 and 2004, and the level of postponement was generally limited. Furthermore, in contrast to most other industrialized countries, the incline in the mean age at first birth remained almost stagnant in that period (rising by only 2.4 years). Accordingly, cohort fertility in the US never dropped below two children.

Nevertheless, it should be noted that the relation between birth postponement (especially the transition to first birth) and ultimate fertility remains unclear. The difference in the mean age at first birth in 2004 between the UK, Finland and Germany (see figure 3) did not exceed two years of age, while fertility differentials, especially between Germany and Finland, re-

mained large. Particularly the Scandinavian countries of Finland and Sweden combine pronounced birth postponement with comparably large family sizes on average. In these countries, there are obviously mechanisms at work that enable some people to realize their childbearing plans even under a limited lifetime budget.

Thus, the age of transition to parenthood tells only part of the story. Important factors include the institutional and structural constraints that affect the ability to realize fertility desires within the time limitations of the life course. Importantly, aggregated indicators like the mean age at first birth do not allow one to identify how different individuals and subpopulations are likely to be affected by structural factors. Only micro-level investigations can unravel the factors explaining how external constraints affect individual fertility choices. Chapter 3 will focus on these contextual factors, paying particular attention to social policy settings. Chapter 4 will theoretically investigate how the individual choice to postpone parenthood emerges from life course-related rationales.

In tracing the phenomenon of continued birth postponement, educational and occupational attainment emerge as central causal factors (see Kohler et al. 2002; Huinink 1991: 304f. for Germany). Their impact is mainly driven by the increased average age at completion of full-time education and increased female educational participation as a result of educational expansion (see Blossfeld 1995; Skirbekk, Kohler & Prskawetz 2004). Furthermore, the increase in educational attainment translates into higher obtainable labour market positions: birth postponement has become especially pronounced in countries, where occupational and familial tasks are difficult to reconcile, and particularly where traditional gender roles exacerbate the difficulties of balancing motherhood and work (see Rindfuss, Morgan & Swicegood 1988).

Additionally, Kohler and colleagues stress that birth postponement is more widespread in countries with high levels of economic uncertainty in early adulthood, especially in Southern Europe (Kohler et al. 2002: 655; 2006: 19). Their argument derives from the assumption that people tend to avoid long-term commitments like parenthood before they have established a sound economic situation[11].

[11] For a discussion of the negative impact of economic uncertainty on fertility, see, for example, Tölke & Diewald (2003), Kreyenfeld (2005b), or Kurz, Steinhage & Golsch (2005). See also Section 3.3 & Chapters 5 & 6.

These underlying factors have pushed mean ages at first motherhood to almost 30 years of age in some countries like the United Kingdom or Germany. Sardon and Robertson (2004: 274) stress that "this postponement of first motherhood to such advanced ages raises questions about the risks of involuntary childlessness run by couples, despite the advances of medically assisted reproduction." A number of studies dealing with infertility at higher ages stress that these concerns are indeed justified. However, the medical factors inhibiting childbearing at later ages should not be exaggerated. In a review of several studies on diminishing effects of age on fecundity, Gustafsson (2001: 243f.) summarizes that between 30 and 40, the probability of miscarriages and pregnancy complications generally increases, such that at age 36, 12.5% of all women experience fecundity problems. In another review, Bongaarts (1982) provides a more detailed view: he estimates the risk of experiencing infertility between 25 and 29 at 6%. Five years later, this risk has increased by 4 percentage points for the same group (30 to 34 year olds), and by another 10 percentage points for 35 to 39 year olds. Thus, a woman between 35 and 39 years of age has about a 20% risk of infertility. This is a considerable proportion, but given the fact that the proportion of women having their first child at this age is limited, so are the overall effects of infertility on permanent childlessness. However, infertility due to continued birth postponement is likely to exert a significant impact in diminishing higher parity births and hence to negatively affect completed fertility.

2.1.5 Decreasing Parities and Desired Family Sizes

A decreasing proportion of higher parity births is a common picture in countries dominated by a late onset of childbearing (considered the limitations stressed in the previous section). Thus, third and higher-order births become increasingly rare while most parents tend to have one to two children (see Lesthaeghe & Willems 1999: 213ff. for Belgium, France, and Italy; Kohler et al. 2002: 652; Kohler, Billari & Ortega 2006: 20). Aside from the limited time spans of fecundity and the increasing costs of parenthood with an increasing number of children, Morgan (2003) stresses the role of ideational changes in the rationales for limiting fertility. He concludes that while "first children were desired for affective reasons […and] second children were rationalized as 'family building', to provide a sibling for the first child…", the economic function of higher-order births has meanwhile become obsolete (ibid. 2003: 592f.; see also Presser 2001: 180)

Empirical investigations of fertility preferences confirm the accuracy of this line of reasoning: fertility desires in post-transitional countries slightly exceed two children, ranging from two children in Germany and Austria (2.0) to well above replacement levels in Sweden (2.5 children); (Bongaarts 2001, 2002; for an extended overview, see Table 3). This two-child-family ideal appears to be a stable pattern across countries, and Huinink (2001b: 6) stresses that it is also stable across educational groups.

Table 3: Ideal Number of Children per Family – Women Aged 35 – 49 in 2000

	Ideal number of children[1)]	CFR 1960[2)]
United Kingdom	2.50	1.97
Finland	2.45	1.96
Sweden	2.50	2.04
France	2.55	2.11
Germany East	1.90	1.80
Germany West	1.95	1.60
Italy	2.20	1.67

Sources: [1)] *Goldstein et al. 2003:484; database: Eurobarometer 2001;* [2)] *Sardon & Robertson 2004.*

Quite startling is the observation that completed cohort fertility levels generally fall short of these preferences in industrialized countries. With a decline in cohort fertility to levels well below the replacement level, as is the case in a number of countries including Germany and Italy, the gap between desired number of children and number of children born tends to widen. In spite of the fact that widely available contraceptives and advances in reproductive medicine offer a great deal of control over reproduction, both men and women are obviously not achieving their fertility desires. Birth postponement not only affects the realization of fertility desires due to involuntary sterility and infertility: More generally, continued birth postponement increases the likelihood that contextual factors will eventually become incompatible with parenthood (see Bongaarts 2001: 476; Zabin, Huggins, Emerson & Cullins 2000).

Recently, evidence surfaced that the solid pattern of the two-child family ideal (see Eurobarometer 1990; Bongaarts, 2001; 2002) is starting to crumble in Germany. A drop in the desired number of children to below the two-child ideal has been reported in several studies (see Dorbritz, Lengerer & Ruckdeschel 2005, basis Population Policy Acceptance Study; Marbach & Tölke 2007, basis German Familiensurvey and Ruckdeschel 2007, basise Generations and Gender Survey). Similar results have since been reported for Austria as well (see

Goldstein et al. 2003; data: Eurobarometer 2001). Steep declines in desired family size to levels likely to fall below two children can also be observed for Italy and Spain (see Testa 2006; data: Eurobarometer 2001 & 2006). This decline in reported family size ideals and childbearing intentions might be a first indication that sustained levels of below-replacement fertility in these countries are now starting to consolidate as a predominant cultural pattern.

Caveats aside, caution should be taken in interpreting such figures as trends of a declining desire for children. The desired number of children reflect a survey-based snapshot: it is affected by a multitude of factors and must be seriously questioned as a proper proxy for lifetime fertility plans. Indeed, the realization and timing of the transition to parenthood and subsequent births are consequence of a multitude of choices and constraining factors that emerge in the individual life course (for a more detailed discussion, see Chapter 4). Aggregated fertility desires do not reveal either individual planning processes (particularly differences across sub-populations) or changes in fertility desires throughout the life course.

Furthermore, several methodological issues are likely to introduce a bias into the cross-national comparability of the indicator outlined[12]. In particular, when surveying the desire for children, one is dealing with a crucial and sensitive area of personal life. Thus, culturally anchored norms regarding parenthood are likely to play a role in cross-national differences in respondent behaviour. Question wording and connotations regarding ideal or desired family sizes pose an additional source of bias (see Bongaarts 1999a: 258). The decline in fertility intentions is commonly interpreted as an increasing indifference towards children and parenthood. Whether this is true can only be answered conclusively by detailed micro-level analysis. Indeed, declining desires for children could well reflect an attitudinal adjustment in the sense of cognitive dissonance, resulting from the perception of latent incompatibilities of parenthood with other life domains[13].

Indeed, figures on birth parities for Germany show that about one-third of all women have given birth to two children, while one-fourth have only one child. These proportions remained

[12] Last but not least, the conjectural decline is interpreted relative to findings in earlier studies (for example Eurobarometer 1990 or the studies mentioned in Bongaarts, 2001 & 2002). However, the various investigations on fertility intentions are limited in their compatibility due to differing populations of analysis (regarding the sex and age groups considered) and differences in the wording of questions. Yet, there is sound evidence of a decline in fertility intentions in the German-speaking countries, where the persistence of the low fertility regimes has been among the longest in the world, entering the fourth decade in 2000.

relatively unchanged between 1970 and 2000[14]. However, the proportion of women with three or more children has decreased by more than half, and had reached about 15% in 2000. At the same time, the level of childlessness has risen drastically over the course of time (see Schwarz 2002). Thus, the decline in completed fertility is obviously due to a decline in higher-order births beyond the second child and an increase in childlessness. Although less pronounced than in Germany, this picture is prevalent in most European countries. Countries in which higher-order birth (beyond the second child) are still prevalent include France and Sweden in particular (see Kohler & Ortega 2002: 154ff.). In contrast, especially the Southern European countries of Spain (ibid. 2002: 175ff.) and Italy show increasing levels of childlessness. Among higher-educated women, Huinink (2001b & 2002) distinguishes between countries with a polarised and a non-polarised pattern of birth parities. The polarised pattern describes the prevalence of both childlessness and two-child families. Traditional gender roles and weak state efforts to reduce the burden on mothers lead to work-family conflicts, which women respond to by focusing solely on one of the two domains, resulting in either childlessness or realization of family size ideals. Countries in this group include the Netherlands and West Germany. Countries with a "non-polarized" pattern show a high percentage of two-child families, accompanied by moderate levels of childlessness and single-child families. These countries include – among others – Finland, France, and Sweden.

2.1.6 Childlessness

In most industrialized countries, the proportion of persons remaining permanently childless has now risen far beyond levels that could be explained by involuntary sterility[15]. Childlessness plays a central role in explaining the fertility decline seen in the last several decades, which also becomes apparent when looking at countries like Sweden and France. Countries

---

13 The study by Marbach and Tölke (2007) offers some insights into this issue.

14 In East Germany, a slight shift has even been seen from two to one-child families. Yet, two-child families in the East are still more prevalent than in West Germany (with 43% vs. 35% in 2000; see Schwarz 2002).

15 The overall proportion of involuntarily childless women is currently around five to ten percent depending on age. This is a rough estimate based on the proportion of women across age groups, unable to conceive (see Bongaarts 1982). These figures correspond to assumptions by Schneider (1996) based on marital fertility in the GDR. There, the proportion of married couples that remained ultimately childless was as low as six percent and hence lay close to natural levels of involuntary sterility (which could be either male or female sterility).

like these, which have managed to recover to near-replacement levels of fertility, show exceptionally low levels of childlessness compared to Spain and Germany. What becomes clear upon closer inspection of childlessness in consecutive cohorts is that most Western countries display one of two major patterns (see Table 4, p. 25). One group of countries, including Sweden (and the also the other Nordic countries with the exception of Finland), the United States, and France show comparatively low levels of permanent childlessness, and this pattern is fairly stable across cohorts. In fact, when one takes into account the average number of children born to each woman, cohort fertility even shows a minor increase in recent years.

Table 4: Prevalence of Childlessness among Women in Selected Cohorts by Country

	1945	1950	1955	1960	1965
West Germany	12.7	14.8	19,3	22.0	27.5
UK	9.8	13.9	15.8	18.9	20.5
Finland [1)]	16.5	17.4	19.1	19.1[2)]	20.1
Italy	11.7	13.0	12.7	15.3	20.0[3)]
US	12.9	15.6	16.0	15.3	15.0
Sweden	12.9	13.9	12.8	13.1	13.3
East Germany	8.2	7.1	7.6	7.8	12.8[3)]
France	8.1	8.3	8.3	10.2	11.7[3)]

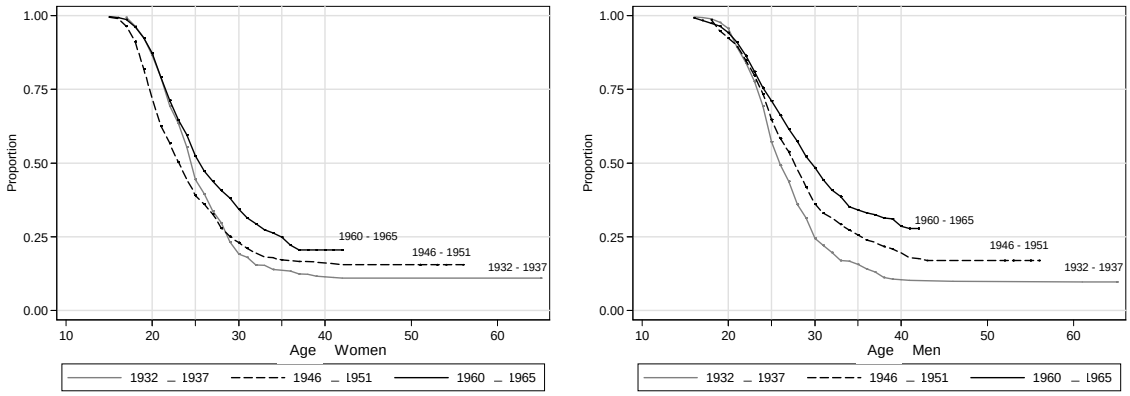
Sources: Sardon & Robertson 2004; Dorbritz 2005; database for both: European Demographic Observatory.[1)] Gustafasson, 2001: 229 (for cohorts 1945, 1950 & 1955).

Notes: All values in percent; [2)] values refer to the 1961 cohort; [3)] values refer to the 1964 cohort.

In contrast, in the second group of countries, which include West Germany and Italy, low to moderate levels of permanent childlessness in older cohorts have given way to a sharp increase in recent years. A particularly steep rise in the proportion of childless women was seen in the 1965 cohort, but this should be interpreted with some caution, as the data on this cohort did not cover the complete fertile life span. Nevertheless, the increase in permanent childlessness over consecutive cohorts is undoubtedly a solid and accelerating trend. This also reflects the situation in most of the Southern European countries like Spain and Greece as well as the German-speaking countries of Austria and Switzerland (see Dorbritz et al. 2005: 372ff.). The UK and Finland are exceptions to these patterns: both have now also reached high levels of childlessness. However, the increase occurred less rapidly than in Germany, for example, and fertility rates remain near replacement levels – most likely because in the aggregate, the inci-

dence of childlessness among some individuals is compensated for by higher-order births among others.

Figure 4a-4b: Kaplan Meier Estimates on First Birth Transition and Ultimate Childlessness German Women and Men in Selected Cohorts.



Source: SOEP 2002, sample F; (author's estimates); n = 1.270. *n = 1.307.*

Note: Estimates include East and West German sample members.

In cross-national comparison, childlessness in Germany – in West Germany in particular – has reached particularly high levels, raising the question of what specific factors account for this phenomenon. Figures 4a and 4b display the transition patterns to first birth among women (left figure, p. 26) and men (right figure, p. 26) in selected cohorts. The estimates reveal two important and closely related trends. In each successive cohort, the birth of the first child is postponed to a later age. Partly as a consequence, the proportion of women and men who remain permanently childless increases in each cohort. This latter trend is displayed in the graph, which levels off at a higher level for each successive cohort. Almost no more transitions to parenthood occur beyond the age of forty, and the longer parenthood is postponed, the lower fertility becomes. In other words, women who become mothers at a later age are likely to have fewer children than women who start earlier.

The graphs indicate that childlessness among men is distinctively higher than among women. This is true for all cohorts except for the oldest. In that cohort, many women remained single or widowed due to male mortality in World War II and its effect on the partner market. In the youngest cohort (1960-65), the difference amounts to about 7%. This difference in childlessness between the sexes has been documented for most industrialized countries (see, for example, Toulemon 2001 for France, Juby & Le Bourdais 1998 for Canada, or Bachu 1996 for the US). Several of the possible reasons put forward for the high number of childless men are useful for analyzing the causes of childlessness in general. First, within marriages

and similarly in consensual unions, men are on average two to three years older than women. Accordingly, the mean age at first birth is higher for men than for women. This does not explain why there is no recuperation for men at the end of their partner's fertile phase, however, when the women are around age 40. A second reason relates to biologically determined sex ratios. About 105 boys are born for every 100 girls, which means that young men have worse chances on the partner market than young women. The fertility effect of this disparity has been highlighted by Eckhard (2006) for Germany and by Köppen, Mazuy & Toulemon (2007: 102) for France.

A further point is that breadwinner norms result in men with an adverse or insecure economic status having an inferior position on the partner market. They thus have a higher likelihood of remaining childless. Many men who are unemployed or have very low incomes in Germany cannot find partners and thus have above-average rates of childlessness, and higher rates in particular than low-status women (see Schmitt 2005). Finally, a small part of the apparent gender gap in childlessness may simply be due to respondent behaviour in data collection. Unlike female births, the transition to fatherhood is not directly observable. A small proportion of men may be unaware of having children while another group may not report fatherhood, perhaps to avoid an embarrassing situation in a subsequent relationship (see Garfinkel, McLanahan & Hanson 1998; Rendall, Clarke, Peters, Ranjit & Verropoulou 1999). Summarizing, the central finding of an increase in the prevalence of childlessness can be traced to an ongoing birth postponement in younger cohorts but also to effects of the partner and marriage markets.

2.1.7 Low Fertility – Temporary Phenomenon or Consolidated Pattern?

Low fertility levels have spread throughout the industrialized world. Until recently, official demographic forecasts have assumed the drop to below-replacement fertility levels to be a temporary process. United Nation population estimates, for example, are based on the assumption that post-transitional countries will recover from below-replacement fertility in the medium to long term (see Dorbritz 1998: 191f.; Bongaarts 1999a: 256). Indeed, a solid upward trend in period fertility exists in numerous countries including the Nordic states of

Denmark, Finland, and Norway, while the list of countries that have managed to recuperate near-replacement levels is short, including the US and France (Bongaarts 2002: 420). For most other modern societies, however, forecasts of recovery above replacement levels are incompatible with the observation of stable patterns of low fertility. Accordingly, U.N. population projections no longer predict a recovery to replacement fertility per se: they have instead been adjusted to assume a consolidation of below-replacement fertility in countries with prolonged patterns of low fertility (for details, see United Nations Population Division 1998).

These low fertility scenarios are seen especially in the countries of Southern and Eastern Europe, which have progressed through demographic transition rapidly and in so doing, plummeted to lowest-low fertility with no recovery in sight. The situation in Eastern Europe is especially difficult to predict: demographic transition there was triggered by the political collapse of the Soviet Union, and went hand in hand with an era of economic shocks and cultural changes that have profoundly affected period fertility. Of all the former Eastern bloc countries, this process was most pronounced in Eastern Germany, where period fertility dropped to the record low of 0.77 in 1993 (for a more detailed investigation, see Sackmann 2000). Today, lowest-low fertility is a common picture throughout the countries of the former Eastern bloc.

In Southern Europe, perpetually rising mean ages at birth and continuously increasing childlessness suggest an ongoing decline in cohort fertility. In a series of Central European countries, cohort measures suggest that fertility is still on the decline as well. This is true especially of Germany, despite the fact that period measures suggest a deceptive stability. Although the pace of decline has clearly slowed in Germany during the last two decades, fertility intentions – dropping only recently below two children – combined with steeply increasing levels of permanent childlessness nourish concerns that low fertility levels have come to stay.

2.2 Recent Developments in Labour Markets, Educational Participation, and Gender Norms

The key goal of this section is to describe the situation, crucial changes, and key developments that occurred in the educational system (Section 2.2.1), on the labour market (Section 2.2.2), and in families in the context of value changes and predominant gender norms (Section

2.2.3). In outlining the current context as well as vital developments in these societal systems and institutions, *I aim to complete the background picture of fertility decline in industrialized countries.* This section does however *not* focus on conceptually deriving causal mechanisms or codes of orientation by which labour markets or gender norms, e.g., affect fertility behaviour. Although I will give reference to such mechanisms at different occasions, in-depth discussion of these issues is reserved for Chapter 3.

2.2.1 The Changed Impact of Education

The promotion of educational expansion introduced during the 1970s had a limiting effect on fertility. Essentially this was a consequence of a twofold effect: first, prolonged periods of participation in educational institutions fostered birth postponement due to the general increase in time spent in the educational system[16], while educational expansion also generally increased the proportion of persons in time-consuming higher education. Second, higher educational attainment translates into a niveau effect of improved career opportunities and higher opportunity costs due to forgone income (see Blossfeld & Huinink 1991; Klein & Lauterbach 1994). This development was and is particularly relevant for women, who were previously disadvantaged in their access to education but now participated increasingly in higher education, allowing them to catch up with men (see Blossfeld 1995). "Today young women […] stay longer in the education system than did women of older generations" (Blossfeld & Huinink 1991: 144).

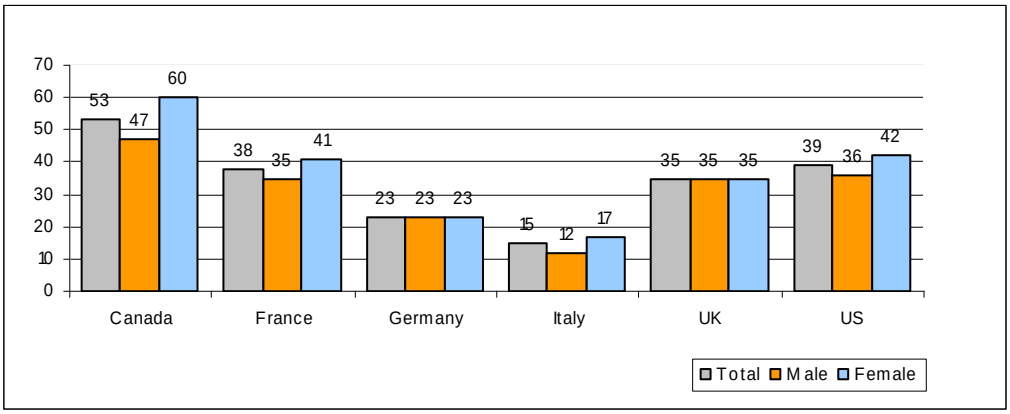
Participation in Educational Institutions

The increase in female participation in time-consuming higher education has continued to the present day, and meanwhile, the proportion of women in higher education in most of the developed countries exceeds that of men. A higher or equal proportion of men to women in tertiary education is prevalent mainly in those countries still characterized by an inherent reluctance to accept egalitarian gender roles, including Germany and the UK. Southern and Eastern

[16] Aside from the fact that the new emphasis on education led to an elongation of specific types of education, the increased permeability of the educational system and labour market demands for highly skilled employees also raised the need for both longer and repeated educational investments (see, e.g., Jacob 2004 for Germany).

European countries deviate from this picture: there, female participation in higher education is also markedly higher than male participation (see Kohler et al. 2006: 653f.), although these societies still show traditionalistic gender relations. This is most likely the consequence of highly gender-segregated labour markets and anticipated labour market competition given the continued prevalence of occupational gender discrimination (see Zollinger-Giele & Holst 2004).

Figure 5: Percentage of the Population Aged 25 – 34 with Completed Higher Education in 2004 by Country and Gender[17]



Source: *National Center for Education Statistics 2007: 49.*

Notes: *Data based on ISCED levels 5A (academic higher education-first stage), 5B (technical and vocational higher education), and 6 (academic higher education second stage / doctoral studies).*

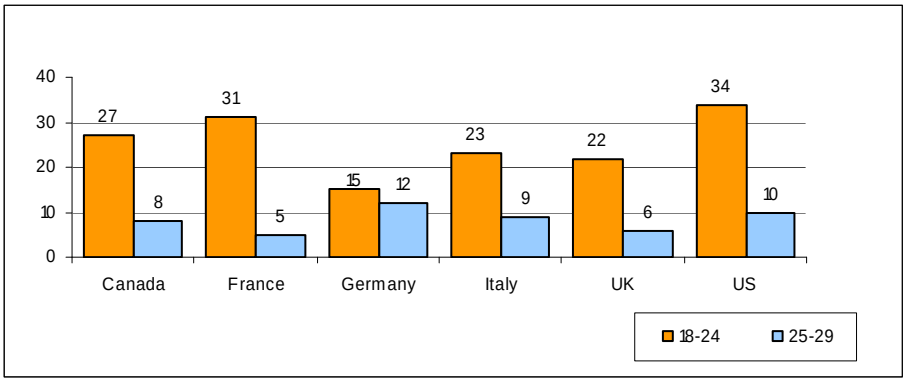
With the expansion of higher education, the mean age at the end of full-time education has risen significantly since the 1970s. And as births before the end of full-time education are rare[18] (see Blossfeld & Huinink 1991: 164; Klein & Lauterbach 1994: 283), educational expansion strongly affects birth postponement. "Comparison of the evolution of university enrolment with the mean age at childbearing is illuminating. The countries with marked increases in higher education tend to be those with the most pronounced delays in the mean age at first birth" (Kohler et al. 2002: 656). An additional effect of educational expansion was that education systems became more permeable while – simultaneously – occupational demands for skilled labour increased. Thus, people increasingly re-enter educational tracks, which

[17] Note that the focus of comparison rests on gender differences. ISCED levels across countries are generally difficult to compare – although the ISCED indicator aims at enabling cross-national comparisons – since differences in the structure of educational systems still translate into cross-country differences in the proportion of persons with a given level of educational attainment (see also Matthes & Mach 2006).

[18] Underlying causes are restrictions of the time budget and a widespread economic dependence during education, hampering the ability to support a family (see Blossfeld 1995: 10 or Skirbekk et al. 2004).

makes educational participation a repeated and less clearly demarcated life-phase (see Brückner & Mayer 2005: 28). These findings are also represented in Figure 6.

Figure 6: Percentage of the Population Aged 18 – 29 Enrolled in Full- & Part-Time Higher Education in 2001



Source: National Center for Education Statistics 2004: 59.

Notes: Data based on ISCED levels 5A (academic higher education-first stage), 5B (technical and vocational higher education), and 6 (academic higher education second stage / doctoral studies). Enrolment data for Germany and Italy excluding doctoral studies.

In relation to overall enrolment ratios, participation in higher education tends to be prevalent beyond the age of 25 in countries in which birth postponement is particularly pronounced, namely, in Italy and especially Germany. This results in narrowed time frames for family formation at the end of full-time education.

The Impact of Educational Attainment

The improvements in (female) educational attainment as a consequence of educational expansion have been translated into substantial increases in obtainable income and career opportunities (see Blossfeld & Huinink 1991). This affects the opportunity costs of parenthood, which additionally increases the birth postponement of more highly educated women. Gustafson (2001: 244) stresses that "the most important factor which works for later births is the woman's career cost." The consequence of this is a reduction of higher parity births and a general increase in the proportion of women remaining ultimately childless. Huinink (2001b) confirms this relation between higher educational attainment and birth parity: among a set of countries including Finland, France, East and West Germany, Italy, the Netherlands, Switzer-

Table 5: Average Number of Years in Formal Education by Gender in 2004

	Men	Women
US	13.1	13.4
UK	13	12.9
Finland	12.5	13.5
Sweden	13.1	13.6
France	11.2	11.7
West Germany	13.6	13.5
Italy	11.2	11.7

Source: OECD Education at a Glance 2006: 41.

land, Sweden, and the US, academics in West Germany, Italy, and Switzerland show the highest levels of childlessness and the lowest levels of births beyond the second child. Detailed empirical evidence for Germany confirms this pattern. Although some figures suggesting that almost half of the women with a university degree will remain permanently childless are exaggerated[19], childlessness is undoubtedly more common among more highly educated women[20].

This picture of a close relation between higher education and lower fertility becomes more ambiguous when observing childlessness among men. Although postponing fertility during educational participation is common among men, more highly educated men do *not* show significantly lower levels of permanent childlessness than the rest of the male population (see Schmitt & Winkelmann 2005 for Germany). Obviously, the breadwinner capabilities of more highly educated men provide advantages on the partner market that foster catching up with less educated men at higher ages. The conflict between parenthood and career opportunities obviously still only exerts a mild effect for men in contrast to women.

Aside from these apparent mechanisms that link increasing educational attainment to fertility postponement and opportunity costs, the research has highlighted education's mediating effects on fertility limitation: educational attainment not only improves labour market chances but also restructures access to alternatives to parenthood (Axinn & Barber 2001: 482). One such mechanism is that higher educational attainment nurtures aspirations beyond parenthood, fostering alternative means of status attainment (Coleman 1990; Easterlin & Crimmins 1985).

---

[19] This assumption is based on evidence from the German Mikrozensus (findings provided by Engstler & Menning 2003). Schmitt & Wagner (2006), however, show that these figures far overestimate the proportion of childless women with a university degree in Germany due to limitations in the data analysed.

[20] A series of studies on Germany from the early 1990s claimed that higher educational attainment exerts a postponing effect but does *not* reduce ultimate fertility (see Blossfeld & Huinink 1991; Blossfeld & Jaenichen 1992). However, empirical evidence sheds doubt on the assumption that more highly educated women will catch up at higher ages (see Brüderl & Klein 1993). Birth postponement is commonly assumed to exert a quan-

Furthermore, improvements in women's access to education tend to translate into increases in their relative power in relationships. Women with a higher educational attainment thus not only have a wider array of options beyond parenthood but also an improved ability to protect their interests and to limit their fertility on the basis of their relative bargaining position. Finally, educational attainment increases the knowledge of contraceptive methods as well as the use of contraceptives (Axinn & Barber 2001: 483). This is also reflected in the finding that extraordinarily high rates of teenage parenthood are especially prevalent in the liberal welfare states of the United States and the United Kingdom, where sex education remains underdeveloped. In these countries, teenage parenthood transitions have been found to be closely related to below-average educational attainment prior to birth (see Kiernan 1997; see Ermisch & Pevalin 2003 for evidence from the UK).

2.2.2 Labour Markets and Rising Female Labour Force Participation[21]

This chapter is devoted to outlining the development of national labour market structures in comparison. In detail, I will focus on the developments in female labour market participation, part-time employment, increasing occupational insecurities, including unemployment – particularly youth unemployment – as well as in public employment in order to depict characteristics of national labour markets as a background to fertility. This chapter will *not* provide a conceptual distinction among institutional patterns and structuring mechanisms in the context of welfare state orientations (see, e.g., Esping-Andersen 1999) or in the context of employee-firm relations and market coordination (see, e.g., Hall & Soskice 2001), respectively. Such typologies and the predominant institutional mechanisms in welfare states and market coordination will be discussed with reference to fertility behaviour in Sections 3.1 & 3.3.

The increase in female labour market participation (LFP) [22] is closely linked to the effects of educational expansion. While improved educational attainment fosters normative sentiments

---

tum effect (see Lesthaeghe & Willems 1999) by reducing higher-order births and by the likelihood of childlessness, which is higher among women with an academic degree (see Schmitt & Wagner 2006).

[21] Note that all data reported in this section apply to the working age population (15-64). All data for Germany before 1991 refer to West Germany only. Exceptions to these rules only apply where specified explicitly.

supporting self-realization outside the family, gainful employment provides the economic foundation to act independently. At the same time, higher education increases the opportunity costs of parenthood by affecting obtainable income. Finally, it exerts distinct pressure to participate in the labour market, given that costly and time-consuming human capital investments otherwise tend to deteriorate (Mincer & Ofek 1982).

Table 6: Female Labour Force Participation Rates 1960 – 2005 by Country

	1965	1975	1985	1995	2005	Male LFP Rate 2005
UK	48.8	55.0	63.2	67.9	68.6	80.1
Finland	62.6	67.7	73.9	69.8	73.2	76.1
Sweden	53.8	67.9	79.3	77.3	76.6	80.7
France	46.2	53.0	56.1	60.2	64.3	74.9
Germany	49.0	50.8	52.5	61.5	67.4	80.4
Italy	34.6	29.9	40.6	42.8	50.7	74.5
EU15	n.a.	43.7	51.1	57.6	63.3	78.5

Source: OECD Employment and Labour Statistics 2007b. SourceOECD online-database.
Note: Values for Germany before 1991 apply to West German only.

Female labour force participation has been rising steadily in recent decades (see Table 6) mostly undeterred, even by cutbacks in the economic cycle (see Rubery, Smith, Fagan & Grimshaw 1998: 13). In Germany, for example, a moderate percentage of women with a vocational education were already participating in the labour market in the early 1950s and 60s (see Tölke 1989, Huinink 1991: 299). While these participation rates were mainly a consequence of a high demand for labour in a period of economic boom, consolidated increases in labour market participation of women with a shift towards skilled labour have been observed since the 1970s.

Such patterns of improving female opportunities in the labour market however, provide no simple links to fertility behaviour. While it has been stressed that fertility decline is essentially a result of birth postponement, "…this postponement-quantum interaction depends mainly on the compatibility between formal labor force participation and children" (Kohler et

[22] The Labour Force Participation Rate displays the relation between working age population and persons aged 15 to 64 who have joined the labour force. Aside from employed persons, unemployed persons are also included in

al. 2006: 667). Aggregate figures of female labour market participation offer a general impression how well women are integrated into the labour force of a society. Mere participation rates, however, conceal how many of those working women are mothers already and how many of them have yet to make their fertility choices. That is, these figures are unsuited to derive how labour market behaviour and fertility choices are interrelated.

An example will serve to illustrate this limitation: I start from the initial assumption that parenthood and paid work are competing life domains. The Scandinavian countries are the most advanced with respect to educational attainment and labour market participation of women. (Lesthaeghe & Willems 1999: 223). Still, fertility rates in these countries are comparatively high. In contrast, countries with relatively low female labour force participation like Italy, Greece, or Spain show fertility rates that rank among the lowest in Europe. This paradox has been stressed by various authors and summarized as *the changing sign effect*, in the correlation between period fertility (TFR) and labour force participation (see for example Esping-Andersen 1999; Brewster & Rindfuss 2000; Ahn & Mira 2002; Rindfuss, Guzzo & Morgan 2003; Engelhardt & Prskawetz 2004). Explanations for this changing correlation are numerous, including income effects, (in-)flexibility in working hours (Ahn & Mira 2002), unemployment (Engelhardt & Prskawetz 2004) and a rather vague reference to unobserved cross-country heterogeneity (Kögel 2002).

The correlation of two aggregate indicators – the TFR and the female LFP – however leads to an analytical dead end. Importantly, it remains unclear, under which conditions women choose to combine paid work and having a child: Does the institutional setup support a combination of gainful employment and motherhood, or are mothers forced to work in order to balance latent economic insecurities? Answers to these questions would offer important contributions in understanding the relation between structural factors and the emergence of individual fertility choices. Instead, the discussion of this question is concealed beneath an overall indicator that does not only aggregate across individuals but also across countries. Yet, especially the focus on national particularities promises substantial advances in the understanding of the relation between labour market participation and fertility. The way in which cross-country differences provoke differences in individual behaviour requires a careful investiga-

---

the denominator. Interpreting this indicator as a general measure of labour market access of men and women

tion of how individual fertility decisions are affected by labour market constraints and the institutional makeup of a country.

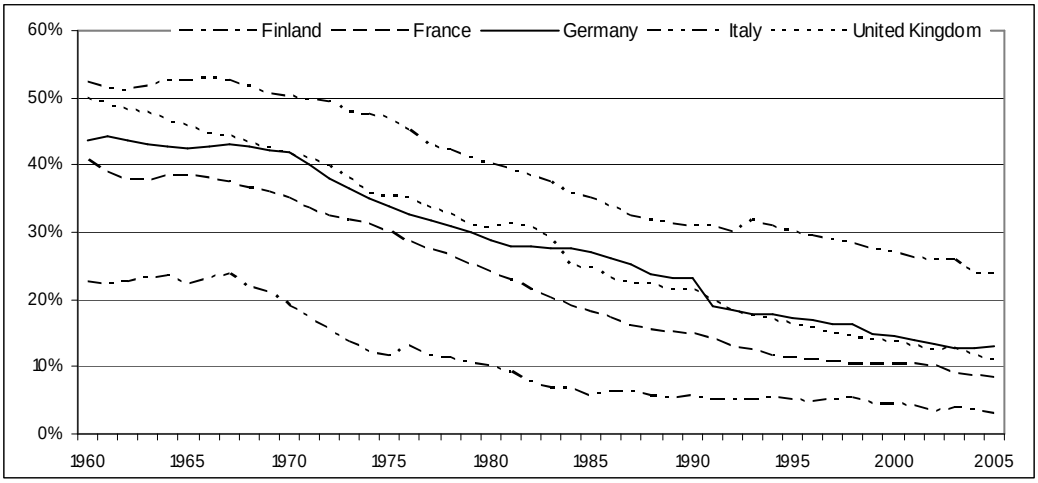
Judging from the circumstances in societies in which high female participation rates in full-time employment coincide with fertility rates near the replacement level (Sweden and France, e.g.) the institutional framework plays a crucial role (see Pfau-Effinger 2000; Morgan 2003 or Aaberge, Colombino, Del Boca, Ermisch, Francesconi, Pasqua & Strøm 2005, e.g.). An attribute, shared by many high fertility countries is a specific approach in social policies to support equality in gender relations and an alleviation of work family conflicts. This also includes the notion that female labour force participation is a common characteristic of modern societies and that solving work-family incompatibilities requires the promotion of egalitarian rather than traditional gender roles. Furthermore, culturally embedded guidelines of the "ideal" division of labour between men and women in a country (see Pfau-Effinger 1996: 464) also play a crucial role in explaining fertility behaviour in the context of labour market participation. The interaction between social norms of gender role differentiation on one side and the institutional framework on the other side has led to numerous national particularities in individual responses to the work family conflict. The impact of the institutional framework on rationales of combining work and family will be discussed in detail in Chapter 3.

In the choice, to either combine work and motherhood or instead to focus exclusively on one of the domains, not only the reconcilableness plays a vital role but also labour market opportunities (stratified by educational attainment) and the necessity to work in order to maintain financial and economic integrity. Yet, women are still disadvantaged in the labour market. Their situation is characterised by lower obtainable incomes relative to men (see Blau & Kahn 2000), and a higher exposure to job related insecurities and unemployment. These gender differences in the labour market meanwhile tend to level up. Still, this process progresses slowly and a complete harmonization remains uncertain. In the mid 2000s, male labour force participation in the EU15 exceeded that of women by about 15 percentage points (see Table 6) but especially from the 1970s to the early 1990s the gap between female and male labour force participation narrowed significantly (see Figure 7). In the Scandinavian countries, which have always displayed outstanding performance in the development towards equal labour

may be misleading in cases where labour market risks in the form of unemployment are gender-biased.

market opportunities of women and men, this difference has meanwhile dropped below five percentage points. And with the exception of Denmark, female unemployment rates have already fallen short of male unemployment rates in all Nordic countries (see OECD 2007a).

Figure 7: Gender Gap in Labour Force Participation 1960 – 2005 by Country



Source: OECD Employment and Labour Statistics 2007b. SourceOECD online-database.

Note: 1) The gap in Labour Force Participation was calculated by subtracting female from male participation rates. Displayed values represent percentage points.
2) Values for Germany before 1991 apply to West Germany only.

Nevertheless, a key issue that undermines equal opportunities of women in the labour market, particularly in countries that keep work-family conflicts institutionally unresolved, is that women have to restrict either their childbearing plans or their labour market engagement. A central labour market characteristic that reflects these responses is the prevalence of female part-time work (see Hakim 1997; Brewster & Rindfuss 2000: 281; Stier, Lewin-Epstein & Braun 2001). In countries, where work family conflicts are dominant, the proportion of female part time work has risen to considerable levels. Empirical evidence shows that in Germany, the transition to motherhood has a massive effect on reducing working hours (see Drobnic, Blossfeld & Rohwer 1999; Trzcinski & Holst 2003). In that sense, it is not surprising that female part-time work is especially common in Germany and the UK, where the supply of public or private childcare is either limited or costly. Furthermore, part-time jobs are frequently associated with "…low qualified occupations with a negative impact on women's career opportunities." (see Aaberge et al. 2005: 133). It is likely that women take into consideration that the transition to motherhood will hamper their labour market integrity. Thus, in societies, where role incompatibilities between work and family are prevalent, especially higher educated women increasingly face incentives to postpone or to avoid motherhood.

The emergence of female part-time work is also fostered by labour market insecurities: Combining male full-time- with female part-time allows a basic division of occupational risks in countries where otherwise traditional gender roles are dominant (see Esping-Andersen 1999: 70). The increase in labour market insecurity emerged since the 1980s and particularly since the second half of the 1990s. It manifests in a massive incline of fixed-term-contracts, a rising prevalence of unemployment, and more generally an increase in precarious employment with less stable and predictable career trajectories (see, e.g., European Parliament 1996 for Finland or Kurz 2002, Diewald & Sill 2004 & Tölke 2004: 5f. for Germany). Such shifts essentially affect population groups with a limited labour market integration, particularly young adults and – with cross national gradation – women of all ages (see Aaberge et al. 2005: 131f.) Importantly, spreading insecurities do not only foster dual earner strategies as insurance against economic risks, but they also hamper family formation due to uncertain economic prospects (Kreyenfeld 2005b for Germany).

Table 7: Emergence of Female Part-Time-Employment 1973 – 2003 by Country

	1973	1983	1993	2003	△1973-2003
UK	39.1	42.4	43.9	**40.0**	0.9
Germany	24.4	30.0	32.0	**37.0**	12.6
Italy	14.0	9.4	11.0	**23.6**	9.6
France	12.9	20.1	26.3	**22.6**	9.7
Sweden	46.0	45.9	41.4	**20.6**	-25.4
US	26.7	28.1	25.5	**18.8**	-7.9
Finland	10.6	12.5	11.1	**15.0**	4.4

Source: OECD Employment Outlook 2007.
Notes: Values for Germany before 1991 apply to West Germany only.

Especially the experience of unemployment in ones early adult life undermines the economic fundaments of a future family, and renders breadwinner capabilities as uncertain (see Tölke & Diewald 2003 for Germany; see generally Blossfeld, Klijzing, Mills & Kurz 2005). Consequence of such insecurities is a general delay in childbearing, until individual labour market risks have been contained. This applies especially in countries, where the capability of the welfare state to provide social insurance against risks is limited. Additionally, high unemployment among young adults is likely to foster labour market behaviour that aims at consolidating the occupational position prior to parenthood in order to protect against future insecuri-

ties (Kohler et al. 2002: 667). Particularly in Southern Europe, "…social exclusion accumulates massively among the ranks of the unemployed young adults." (Mayer 2001: 107).

Yet, the relation of this indicator is not as straightforward as the first glance suggests: In France as well as in Finland youth unemployment is substantial, although fertility levels rest near the replacement level. In contrast, birth postponement is extensive in Germany and the UK, whereas both countries show traditionally low levels of youth unemployment. However, what appears to be a contradictory finding should be interpreted with caution. How unemployment in ones early adult life hampers family formation over the life course requires a micro-level as well as a life course focused analysis. Again, aggregate level data only tell part of the whole story, being incapable to provide a close understanding of the underlying mechanisms that drive the interaction between occupational status and individual fertility behaviour.

Table 8: Emergence of Youth-Unemployment 1975 – 2005 by Country

	1975	1985	1995	2005	Adult UE 2005
Italy	12.8	33.9	31.9	**24.0**	7.8
France	7.8	25.6	25.9	**22.8**	9.9
Finland	5.5	9.7	29.9	**20.0**	8.5
Germany	5.6	9.9	8.2	**15.2**	11.3
UK	8.7	17.8	15.3	**12.2**	5.1

Source: OECD Employment Outlook 2007.

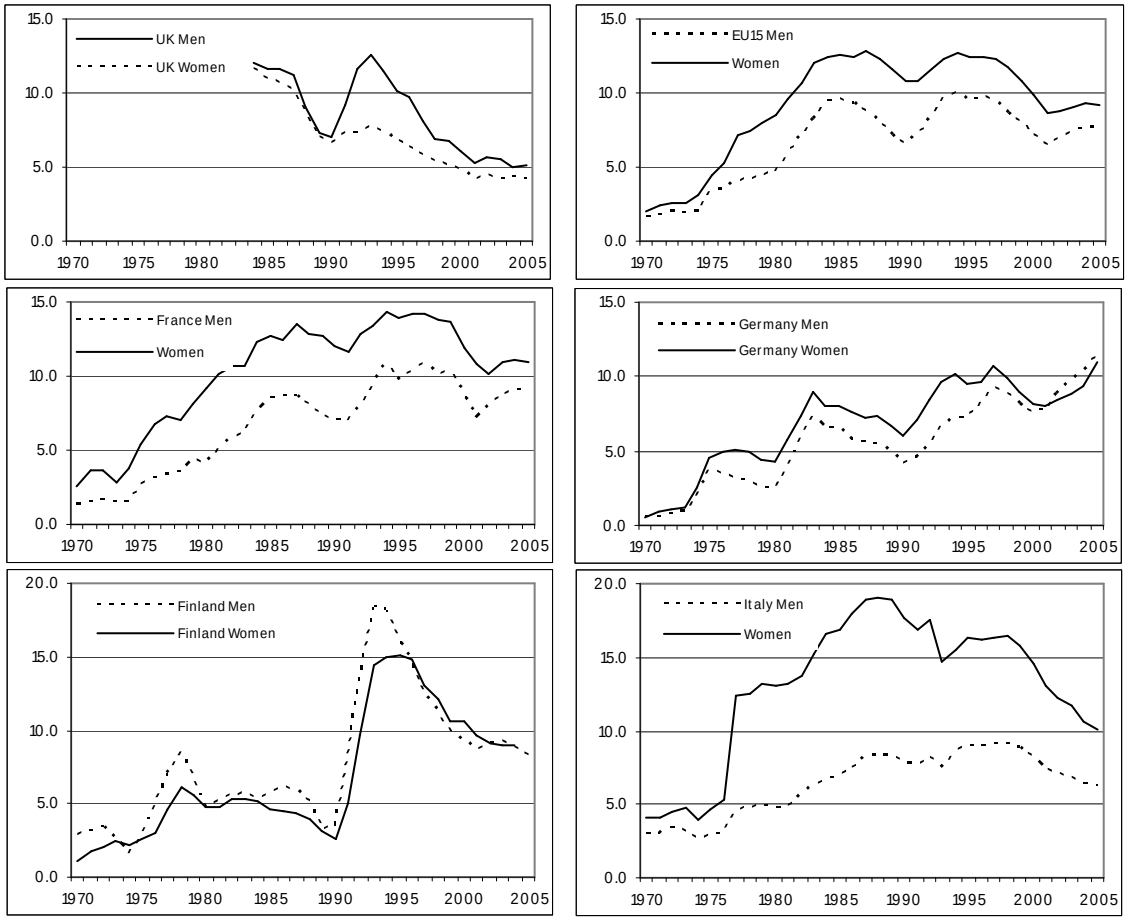
Notes: 1) Youth Unemployment as defined here is based on ages 15 to 24;
2) Values for Germany before 1991 apply to West Germany only.

Additionally, national particularities in Germany and the UK tend to bias the cross-national comparability of these figures: In Germany an almost obligatory system of three years of vocational education combined with continued schooling tends to diminish youth unemployment rates although prospects may still be bleak after this training period. In the UK, limited eligibility for unemployment support tends to obscure the *recording* of youth unemployment, which is instead observed as economic inactivity. Last but not least, cultural differences may affect the individual perception of risks, and fertility behaviour may accordingly differ across countries.

Turning from youth unemployment to gender differences in *overall* unemployment rates, a central observation is that women are still exposed to a higher risk of becoming unemployed in most industrialized countries. However, across Europe a tendency towards a convergence

of male and female unemployment rates can be observed and parallels the convergence in labour market participation rates of men and women. Yet, cross-national differences in this process are substantial. In Southern European countries, women are still exposed to a distinctively higher risk of becoming unemployed than men. In Italy, throughout the second half of the 1980s, female unemployment exceeded male unemployment by about ten percentage points. This massive unemployment risk is an impressive indicator of the limited integration of Italian women into the labour force. Also in France, female unemployment rates traditionally exceed those of men.

Figure 8a-8f: Gender-Specific Unemployment in the EU15 and in Selected Countries 1970 – 2005 by Gender



Source: OECD Employment and Labour Statistics 2007b. SourceOECD online-database.

Note: All values in percent. Values for Germany before 1991 apply to West Germany only; Data for the UK unavailable before 1985.

In contrast, the unemployment risk for women in Sweden and Finland, but also in the UK has reached similar levels as the male unemployment rate. In recent periods, female unemploy-

ment even fell below the rate of male unemployment in most of Scandinavia, the UK, and lately also in Germany. Especially during the deep recession in the mid-1990s, women in Finland and also in the UK have shown a much lower unemployment risk than men[23]. This is most likely consequence of the fact that women meanwhile increasingly gain ground in skilled occupations that came through the labour market crisis comparatively well (see Haapakorpi 1995 for Finland).

Furthermore, gender-specific labour market segmentation favours women in terms of unemployment risks: in almost all industrialized countries, women are overrepresented in the service sector, which has been showing more profound growth than the now almost stagnant industrial and agricultural sectors, thus offering a broader array of employment opportunities. Finland provides a particularly good example of these developments. There, the collapse of the Soviet Union led to severe cutbacks in agricultural and industrial trade with a major impact on the labour market (see European Parliament 1996). The occupations least affected included the service sector and high-skilled professions, which resulted in relative improvements in female labour market opportunities and resulting in comparatively low levels of female unemployment during that period (see Pfau-Effinger 2000: 193). Again, male-female differentials are central indicators of labour market structure and of women's integration into the labour force. Fertility rationales in the light of individual unemployment (or of high unemployment rates that signal insecure prospects) are a different story. The individual experience of unemployment suggests different fertility rationales for men and women, and also across educational groups (see Kreyenfeld 2000; Liefbroer & Corijn). Chapter 5 will provide an in-depth analysis of the fertility effects of the individual experience of unemployment.

An additional labour market characteristic that distinguishes the Scandinavian countries from other industrialized countries is their high share of public employment. Women are overrepresented in this type of employment, which is relevant for fertility issues as these occupations commonly support parents in terms of flexibility, monetary family support, and legal settings. This minimizes the economic risks of parenthood and improves the ability to reconcile

---

[23] A word of caution should be added for the apparently low female unemployment in the UK. Due to the limited unemployment benefits in the UK, unemployed women merge into the hidden labour force. Accordingly, many female labour market re-entries occur from inactivity. The lack of public unemploy-ment benefits causes these women to disappear from the official unemployment statistics, leading to an underestimation of female unemployment, especially in periods of bleak labour market prospects.

work and family. The near-replacement levels of fertility in the Nordic countries have also been attributed to this high share of public employment, which accounts for about one-third of all occupations. The downside of an expanded public sector, however, appeared in the Scandinavian countries during the labour market crisis of the early 1990s, when the high costs of funding public employment seriously hampered the government's ability to support recovery from economic recession.

Table 9: Public Sector Employment in 2003 by Country

	Total	Women in the Public Sector
Sweden	**34.4**	72.8
France	**30.2**	n.a.
Finland	**27.6**	69.9
U.K	**20.0**	64.9[1)]
US	**16.6**	57.2
Germany	**15.7**	50.1
Italy	**15.1**	53.2[1)]

Sources: ILO Bureau of Statistics 2007, (author's calculations); [1)] Eurofund 2007.

The above discussion has outlined central characteristics of labour markets affecting female employment. However, the causal mechanisms that link fertility behaviour to individual labour market participation are complex and require a more detailed analysis anchored at the micro level. This perspective will be discussed theoretically in Chapter 4 and empirically analysed in Chapters 5 to 7.

2.2.3 Ideational Changes and Gender Roles

This chapter will complete the background picture of declining fertility, outlining key changes in values and norms regarding attitudes towards marriage, parenthood, and – more generally – gender relations that have occurred in recent decades. While addressing the role of cross-national differences and developments in underlying cultural patterns such as secularization, this chapter will not focus on analyzing the mechanisms by which cultural shifts interact with institutional orientations and structural factors to affect fertility behaviour, but will leave these issues for Chapter 3.

The coincidence of ideational shifts with a notable increase in female educational participation and labour force attachment indicates a close relationship between these processes jointly affecting fertility. The fundamental change in values relates to a "…reduced legitimacy of normative regulation and authority, increased secularism and […] increased tolerance for alternative life-cycle structuring" (Lesthaeghe & Moors 2000: 212). Van de Kaa (2001: 295) dates the beginning of this development to the mid-1960s and links it to a general shift to-

wards postmaterialism in industrialized countries, reflecting social egalitarianism and a declining adherence to traditions and customs. (see ibid. 2001: 297; for general discussion, see Inglehart & Welzel 2005). Abraham Maslow's concept of changing needs is a cornerstone to explaining the emergence of post-materialist values. It assumes that when basic needs like physical well-being and security have been satisfied, the individual's focus shifts towards higher-order needs like social approval and self-actualization. In fact, most modern countries provide conditions in which basic needs are rarely at stake. The essence of this social change affecting fertility decline can be traced to weakening normative expectations regarding marriage, sexuality, and parenthood and the increasing emphasis on individual autonomy and self-actualization[24] (see van de van de Kaa 1987: 7; Lesthaeghe & Neidert 2007: 38).

In this process, parenthood has lost its prime position in the life course as the prime means of self-actualization and status attainment (see Morgan 2003: 592). The growing acceptance of women pursuing paths aside from marriage or motherhood has in turn fostered female educational and labour force participation. Postponement of parenthood became possible because weakening norms also affected social expectations regarding "proper" birth timing: the tight corset of closely determined life course transitions has been loosened, and today there is little that determines birth timing aside from biological limits and perhaps the partner market (see Presser 2001). The availability of effective medical contraceptives has provided the general possibility to plan and determine birth timing. But only the increase in *social acceptance* of these methods through continued secularization has made widespread use of birth control possible (see van de van de Kaa 1987: 5f.). The weakening of religious norms that has allowed parenthood to separate itself from the institution of marriage has also undermined the monopoly of this institution as being the sole legitimate place for sex and cohabitation. The result has been a significant decline in marriage rates during the 1970s and increasing acceptance of alternative living arrangements. Between 1970 and the early 2000s, marriage rates have dropped by almost half in most western industrialized societies[25] (see Sardon & Robertson 2004: 302f.).

---

[24] Van de Kaa summarizes these changes in value orientation as changes in – as he puts it – "*Weltanschauung*" (van de Kaa 2004a: 9)

[25] An exception here is again Sweden, where marriage rates were very low even in 1970, preceding the developments in most other countries by several years.

Table 10: Extra Marital Births per 100 Live Births in 1970 & 2000

	1970	2000
Sweden	18.6	**55.3**
East Germany	13.3	**51.5**
France	6.8	**42.6**
UK	8.0	**39.5**
Finland	5.8	**39.2**
US	10.7	**33.2**
West Germany	5.5	**18.6**
Spain	1.4	**17.7**
Italy	2.1	**9.7**

Source: Sardon & Robertson 2004.

The effects of secularization, however, differ across Europe: Under traditional schemes, a relationship requires institutionalisation to be socially accepted. This also fulfils the function of making a public promise of mutual long-term commitment. If, however, the binding character of marriage is eroded in the process of changing values (see Table 11, next page), this also undermines the ability of this institution to provide a lasting safe harbour for a child. Accordingly, parenthood and marriage are still closely bound in countries where deeply embedded religious norms continue to structure society. This includes the Southern European countries of Italy and Spain, where Catholicism still profoundly affects the social environment. The example of West Germany shows that – although the country appears to be profoundly secularized – religious norms are still implicitly embedded in societal institutions: legal claims and eligibility for parental benefits are in various respects restricted to married parents (see Wrohlich & Dell 2005). In contrast, the institutional framework of the GDR was deliberately disassociated from religious norms during the decades preceding reunification, thus exerting a profound secularizing effect on East German society as a whole. To this day, this process has left a deep imprint on social norms and individual behaviour. Accordingly, out-of-wedlock births there are quite common, producing a picture of East Germany resembling the Scandinavian countries or France (see particularly Leridon 1990; see Table 10) more than West Germany in various concers. The reference to out-of wedlock births provides an initial impression of how cultural patterns affect fertility behaviour, although the link between secularization and fertility is certainly more complex than this sketch suggests (a more detailed discussion follows in Section 3.4). The central finding is that ideational shifts affect the context of fertility behaviour substantially, and this process differs across welfare states because the interplay between changing values and cultural background produces different outcomes.

Table 11: Total Divorce Rates per 100 Marriages in 1970 & 2000

	1970	2000
Sweden	23.3	54.9
Finland	16.9	51.2
UK	16.0	42.0
Germany[a)]	15.0	40.6
France	12.3	37.8
Italy	5.1	10.1[b)]

Sources: Sardon & Robertson 2004; Council of Europe 2006; database: European Demographic Observatory.

Notes: [a)] *Figures are based on joint rates in East and West for both 1970 & 2000*
[b)] *Value applies to 1998.*

Another important aspect related to value change and relevant for fertility development is the increasing instability of marital and consensual unions, and the emergence of "patterns of sequential promiscuity" (Brückner & Mayer 2005: 28). The shifting focus towards self-actualization has strengthened the affectual aspects of intimate relationships (see Giddens 1992). As a result, decreasing mutual attraction often leads to a higher propensity towards separation where normative bonds no longer maintain the integrity of partnerships. On the aggregate level, these trends manifest themselves in a higher prevalence of marriage dissolution and divorce (see Table 11). Sweden and Finland rank among the countries with particularly high divorce rates, which reflects high levels of individual autonomy but also gender equity, based on the economic independence of women in these countries. The situation in Italy represents the opposite pole: there, divorce rates are low and have only increased slightly since the 1970s. In this country, gender relations are still determined to a great extent by traditionalism, and female labour market participation is particularly low, resulting in a higher proportion of economically dependent women. Yet, in a broad cross-national perspective, the link between divorce rates and aggregate fertility does not provide a concise picture. It is likely that societal and institutional particularities translate the consequences of changing values into different types of fertility behaviour. This provides a further argument in favour of a micro-level perspective to understand the relation between cultural patterns and fertility behaviour, which only merge into aggregate fertility in the sum of their particularities. The underlying argument is that widespread birth postponement increasingly tends to limit the time span available for family formation. The increasing instability of relationships nourishes the likelihood that people will either be unable to establish a lasting partnership or that their partnership will not develop a level of reliability, deemed sufficient for family formation. A number of empirical findings based on micro-level analysis support this line of argument (see Klein 2003, Eckhard 2006 for Germany; Coppola & Di Cesare 2007 for Italy & Spain).

Changing Gender Roles

Closely interwoven with changing values is the containment of traditional gender roles and the increasing emphasis on gender equity. Just as traditional female gender roles have lost their universal acceptance, the level of female labour market participation has increased significantly. Market employment is no longer the exclusive domain of men. But while occupational gender roles have changed significantly (see Soskice 2005: 173ff.), family roles have remained remarkably segregated between men and women (see Kroska 1997; Noonan 2001 for the US). Today, men contribute more to housework while women do slightly less. Yet, overall, the distribution of tasks within the family fails to show signs of a fundamental shift away from the traditional division of domestic labour (see Shelton & John 1996: 300). A cross-national comparison of the division of housework provides empirical evidence that in all countries observed, women's share of domestic tasks clearly exceeds the contributions by men (see Fuwa 2004). The most egalitarian distribution of household labour between men and women is found in the Scandinavian countries, including Norway and Sweden, although East Germany, Canada, and the US also show relatively high male contributions. The high rate found in East Germany is most likely because the institutional settings in the GDR favoured egalitarian gender roles and supported female full-time employment, which appears to have exerted an effect up to the present day. In contrast, the division of housework in West Germany is more traditional, and the share of male contributions ranks close to that in the UK or the Netherlands. The countries with by far the most traditional division of domestic labour include Ireland, Italy, and Japan (ibid. 2004: 757). The commonality across the countries mentioned is that male involvement – in paid work and in housework – has not changed fundamentally during the last decades (see Geist 2005). For women, however, a general focus on family and a desire for parenthood in particular clearly limits occupational perspectives and opportunities.

> "In advanced economies today, women are able to compete in the labor market as equals so long as they are not constrained by their family roles. Women who value their involvement in individual-oriented institutions are therefore faced with a dilemma if they perceive a potential future family role is inconsistent with their aspirations as individuals." (McDonald 2000: 438).

The situation in Italy may serve as an example of this contradiction. There, young men tend to leave the parental home at a relatively high age, in their late 20s. Until then, these men ex-

perience socialization in a highly traditional environment. If they enter a union, their female partners are usually a few years younger but have already experienced several years of an independent lifestyle. The mutual role expectations of the partners are hence likely to be a constant source of tensions. The transition to parenthood exaggerates this contradiction between a traditional female role and individual aspirations of women, which is likely to foster their reluctance towards motherhood (see Presser 2001: 182).

The incompatibilities between female gender roles, role expectations, and female aspirations decisively affect both fertility and labour market behaviour. The decline in fertility reflects the incompatibility between female roles in the family and on the market. But while many women try to combine occupational and family roles, employers' anticipation of these doubled burdens also results in occupational gender discrimination (see Bielby & Baron 1986; Beblo 2001: 13f.; Soskice 2005: 174). Furthermore, these attempts also shape occupational sex segregation. Women are more integrated into labour market segments and work contexts where the tasks resemble traditional female family roles[26], and which are compatible with domestic tasks in general and childrearing in particular (see Bielby & Baron 1986 & Brown 1998 for the US; Corsten & Hilmert 2001: 30; Soskice 2005: 173; see Erlinghagen & Knuth 2002: 32 for Germany; for a cross-national perspective see Charles 1992 & Charles & Grusky 2004).

Yet, where labour market requirements in some occupations become too demanding, imposing limitations on temporal flexibility and spatial mobility, these incompatibilities extend to parenthood as well. (see Oppenheimer 1973). Under such settings, a more egalitarian distribution of housework is the central means to relieve women from the burden of traditional tasks. Essentially, egalitarian gender attitudes of *men* (rather than those of women, who – given a traditional status quo – are on the receiving end) have been found to be a crucial factor in the distribution of domestic tasks (see Presser 1994: 349; Shelton & John 1996: 306).

With respect to parenthood, there is some evidence that today the affectual component of father-child relationships is becoming increasingly important, particularly among younger co-

[26] Empirical findings for Swedish women with an academic degree underline these findings: the evidence suggests that fertility varies substantially with the *type* of higher education. Women with a teaching or health-care degree show comparatively high fertility, while women in aesthetic or humanist occupations show low fertility and high rates of childlessness (see Hoem, Neyer & Andersson 2006).

horts (see Rindfuss & Brewster 1996 for the US; Kassner & Rüling 2005 for Germany). But while egalitarianism in gender roles is increasing slowly and childcare in particular remains a largely female domain, social policies promoting an egalitarian gender ideology have been found to be positively associated with male contributions to childcare and housework. This is perhaps one reason why countries that promote gender equity have fared better in terms of fertility development, especially if they provide positive incentives to foster male participation in domestic and particularly parental tasks (see Geist 2005; Hook 2006). This is the case, for instance, in France (see Dienel 2003), Finland, and Sweden (see Hoem 2005) – all countries that rank among the highest in fertility rates in European comparison.

Chapter Three

Institutional Regimes and Fertility

Chapter 2 provided a general background picture of recent developments of fertility and of key institutions of relevance in this context. Based on this background, the aim of this chapter is to provide a frame of reference for a cross-national comparison based on a general typology of institutional regimes with focus on welfare state orientation, gender issues, life course outcomes and the underlying cultural patterns (Pfau-Effinger 2000: 239 suggests a similar approach). The goal is to gain a deeper understanding into how institutions affect fertility behaviour across welfare regimes. Essentially, I will deal here with how the respective settings are intertwined with the specific cultural, institutional, and socio-structural characteristics of a given country, and how these factors interact in shaping life course outcomes in general, and fertility behaviour in particular. In detail, I will focus on gender inequalities as consequence of welfare policies, and I will argue that these specifics are crucial for understanding cross-national differences in fertility regimes. The findings outlined on the previous pages regarding both national particularities in institutional background and fertility development will form the foundations of the framework of cross-national comparison that I will develop in the following. With the typologies of regime differentiation to be outlined, I intend to highlight frames of references for a cross-national study. Nevertheless, such an ideal-typical summary across countries builds on oversimplifications that cannot replace detailed national-level investigations (for a discussion see Hall & Soskice 2001; Mayer 2005: 43ff.; Hall & Soskice 2003: 243f.) Thus, it should be made clear that the main purpose of the following typology is to provide an analytical heuristic in order to stress and elaborate the mechanisms by which institutions shape individual lives in general and family formation choices in particular.

As female labour force participation has increased to become a social norm, work-family conflicts have intensified to become key issues in fertility behaviour. In fact, welfare states – depending on their respective institutional alignment – use policy tools and incentives either to create new roles for women as autonomous labour participants or to reproduce traditional

female roles as family caregivers. These tools of course also have implications for men, particularly with respect to the degree to which they are encouraged to take on traditionally female chores within the home. The welfare state alignment reflects the dominant perceptions about the role of different institutions in society – especially regarding the family as an insurance coalition. Cross-national evidence suggests that a low degree of secularization nurtures a patriarchal structure of the market and family. However, a shift towards more egalitarian gender roles and increased female labour market participation results in severe conflicts, whereby claims for female autonomy collide with institutional incentives fostering traditional roles. Parenthood is a key element in this relationship, and the performance of the welfare state in alleviating conflicts between occupational and domestic roles and in relieving the burden on women varies significantly across countries. The consequences of such policies include delayed or even abandoned fertility plans if the resulting role conflicts exceed individual capabilities for reconciliation and ambiguity tolerance.

Section 3.1 will discuss the seminal classification of welfare states proposed by Gøsta Esping-Andersen, which offers a useful and well established frame of reference for comparison across welfare regimes (see Bambra 2004). However, this typology fails to provide a differentiated view of gender issues in welfare policies, or on how institutionally mediated inequalities translate into life course outcomes. Taking into account this shortcoming, the tripartite typology will be flanked by a perspective allowing for more profound consideration of the interrelation between paid work and fertility from a gender as well as from a life course perspective. Section 3.2 will thus expand the original typology to incorporate the deliberate consideration of gender inequality as a consequence of welfare policies, while Section 3.3 addresses regime orientation and institutional organisation with respect to their impact on shaping life courses, and crucially the impact on key transitions like family formation. Section 3.4 will then focus on the role of the cultural background to provide a deeper understanding into how culture-based orientations affect fertility behaviour. Section 3.5 will provide an in-depth view of the role of specific social policies, and will establish why these policies need to be integrated in order to influence gender issues and fertility behaviour.

3.1 A Welfare State Typology as a Frame of Cross-National Comparison

In providing a general typology of welfare regimes, this chapter will outline a frame of reference for understanding cross-national differences in fertility. This follows the notion that welfare states shape people's opportunities and responsibilities in society in a way that fundamentally affects their childbearing plans. The regime typology to be presented here offers a structured view of the welfare state measures that are designed to disburden individuals from risks and hardships (see Pfau-Effinger 2000: 239), thus exerting either a supportive or restrictive impact on fertility behaviour. I will start by providing a classification of welfare regimes based on the seminal typology of Esping-Andersen (1990 & 1999). This typology was chosen from among the broad variety of welfare state concepts available (for an overview, see Arts & Gelissen 2002: 142 ff.), because it has been shown to offer a well elaborated and accurate framework (see Arts & Gelissen 2002; Bambra 2004) with a special focus on the relation between welfare policies and labour market participation. This perspective encompasses one of the central issues of the contribution at hand: the interrelation of labour market participation and fertility[27]. Yet, the chronic neglect of the role of women and gender issues in the classification of the three worlds of welfare capitalism has been an aspect of constant critique on Esping-Andersen's work (see Langan & Ostner 1991; Lewis 1992; Ostner 1998: 229; Meyer & Pfau-Effinger 2006: 71). The rationale of the present study is to turn this central weakness into a strength: while this Section (3.1) presents an outline of welfare regimes based on the three worlds of welfare capitalism (Esping-Andersen 1990), Section 3.2 will consider extensions to this seminal work that offer a distinction of welfare policies from a gender perspective. The former approach provides a highly differentiated frame of reference for a cross-national perspective on welfare regimes, whereas the latter allows a closer investigation of particular gender issues. While this gender focused differentiation does not provide an exhaustive cross-national comparison, it is still crucial for understanding the impact of welfare policies on fertility behaviour.

[27] A distinction of welfare states with respect to family policy orientation that is widely compatible with Esping-Andersen (1999) has been suggested by Gauthier (2002: 452ff.)

Basic Classifications and a Welfare State Typology as a Starting Point

Esping-Andersen views the basic principle of the welfare state in providing insurance against risks – including class risks, life course risks, and intergenerational risks – and in compensating family and market failures (1999: 36). The different types of welfare regimes produce different approaches toward generating solidarity and managing risks by relying to different extents on the institutions in "…the inter-causal triad of state, market, and family" (ibid. 1999: 35). According to Esping-Andersen, the alignment of a given welfare state policy can be characterized by the degree of stratification, de-commodification (see ibid. 1990), and de-familialization (see ibid. 1999) in that society:

- *Social stratification* describes the alignment of a welfare state in its focus on either reducing or reproducing differences across the vertical structure of society. Welfare states that strive to limit social stratification offer universal social support without restrictions on eligibility and avoid granting privileges and differential support across social classes or status groups.
- The level of *de-commodification* in a society describes the extent to which actors are disengaged from market dependence and able to maintain a livelihood regardless of market participation or performance. The concept of de-commodification has received severe critique, however, for focusing the perspective on those actors who are already attached to the labour force. This view neglects the consideration of any gender bias in labour market access (see Lewis 1992: 159f.; Sainsbury 1996: 36; Ostner 1998: 229), particularly with respect to the discouragement of female employment and the encouragement of the female homemaker role.
- In response to this critique, Esping-Andersen revised his original typology (1990) and introduced the dimension of *familialism* and *de-familialization* in order to further distinguish the alignment of a welfare state (see Esping-Andersen 1999: 47ff.) This concept of familialism denotes the extent to which the actors have "…command of economic resources independently of familial or conjugal reciprocities" (Esping-Andersen 1999: 45). Welfare states that rely extensively on familial solidarity to minimize individual risks tend to reproduce traditional family structures and strengthen the patriarchal role of the male breadwinner and female homemaker.

The Three Worlds of Welfare Capitalism

From these central dimensions, three basic types of welfare regimes emerge[28]: the first is the ***liberal welfare regime***, which is prevalent in the Anglo-American countries. Market sovereignty and encouragement of labour market integration are the prominent characteristics of this type, whereas de-commodification is virtually non-existent and social stratification is market-mediated. The state intervenes on a minimum level, covering only the most severe risks and hardships. Instead, private welfare schemes are subsidised, promoting market-based insurance. Long-term support is avoided, and both the range and level of social transfers are limited and commonly subject to means-testing. In some cases like the US, this even excludes national health care or maternity benefits from the standard repertoire of social policies.

The ***social democratic regime*** aims – in contrast to the liberal regime – at the minimisation of market dependency and focuses on the de-commodification of welfare. Welfare schemes offer a high level of universal eligibility, independent of individual contributions. Entitlement is attached to citizenship rather than to an employment relationship (see Palme 1990). The primary aims of this pre-emptive state support, which does not rely on private solidarity or individual market integration, are to provide not only diverse health care services, or catering to family needs but also care for children and the elderly. This welfare regime encourages female full-time employment and promotes egalitarian gender roles. But these virtues also come at a price, since the high level of state-guaranteed social security is costly and depends on high rates of labour market participation among both men and women.

The ***conservative welfare state***, also described as the Continental European type, shows strong corporatist traits. It features a moderate level of de-commodification, where it shares with the social democratic regime the notion that protection is required in addition to market mechanisms. Yet, eligibility is frequently limited by extensive prerequisites – most notably, labour market participation. Familialism is predominant in this welfare regime, and families are strengthened as central support networks. This is achieved by nurturing the "male-breadwinner bias of social protection" (Esping-Andersen 1999: 83) and by discouraging female labour market participation, hence establishing family solidarity through the reproduction of traditional dependencies within the family.

Table 12: Institutional Variation across Welfare Regimes

	Germany	UK	France	Finland
Labour market intervention				
Regulated	✓		✓	✓
Deregulated		✓		
Welfare state based support				
Employment-based support	✓		✓	
Citizenship-based support				✓
Generally low support		✓		
Extensive family services	✓		✓	✓
Traditional family services	✓	✓		
Income taxation				
Individual taxation		✓[29]		✓
Family tax-splitting			✓	
Spouse tax-splitting	✓			
Role of state				
Non-interventionist		✓		
Regulatory	✓			✓
Public ownership			✓	

Sources: Mayer (2001) for Germany, UK and France; own attributions.

The description of the conservative welfare state has been challenged as being the most ambiguous type in Esping Andersen's classification (see, e.g., Manow 2002) And indeed, the "real-life" manifestations of this ideal type do include fundamentally different welfare states such as Germany, France, and Italy under the conservative label (see Esping-Andersen 1990). It has been suggested that the original three worlds of welfare capitalism need to be expanded to include a fourth type (see Esping-Andersen 1999, Ferrera 1996, or Mayer 2001). According to this view, Italy belongs – together with Spain, Portugal and Greece – to a fourth type, namely the ***Mediterranean* or *Southern Rim welfare state***, originally specified as an immature continental regime. These Mediterranean welfare states are characterized by a distinct

[28] Representatives of these ideal types include the US for the liberal regime, Sweden for the social democratic regime, and Germany for the conservative welfare state (see Esping-Andersen 1990: 143).

[29] Income taxation in the UK is generally individual-based. However, low-income earners may be eligible to receive a means-tested tax bonus if they have to support a dependent family.

familialism, a deep Catholic influence,[30] and a social support system that lacks clear priorities, oscillating between minimum support and generous protection (for a discussion and overview see Arts & Gelissen 2002: 142ff.)[31] [32].

3.2 A Gender Perspective on Welfare Regimes

The view on gender issues in the typology above provides an inadequately developed foundation for studying the fertility effects of different welfare state alignments. Also the concept of de-familialization is limited in its capability to anchor such a perspective. Since the extent to which a welfare regime promotes either egalitarian or traditional gender roles is crucial to understanding the relations within the triad of welfare policies, gainful employment, and fertility, I will refine the above classification of welfare regimes by incorporating a gender perspective. However, rather than a replacement, the following discussion aims at offering an alternative view of a welfare regime differentiation to the view provided by Esping-Andersen. The aim is to prepare the path for a cross-national perspective that is capable of taking into account how welfare policies affect the male and female roles that eventually influence motives to pursue, postpone, or abstain from parenthood.

Perhaps the most important issue in understanding how welfare policies reproduce gender inequalities is the issue of paid vs. unpaid work (see Lewis 1992; Lewis & Ostner 1994; Sainsbury 1996, 1999b; Arts & Gelissen 2002: 147; Pfau-Effinger 2000; Meyer & Pfau-Effinger 2006: 71). Where the conservative welfare state places a key focus on supporting families, it does so by encouraging a traditional division of labour. In turn, the provision of

---

30 Greece deviates from this picture of pronounced Catholicism but also shows fundamental religious influences in policy matters.

31 Accurate classifications are also pending with respect to the Eastern European countries, which share a common socio-economic history and similarities in cultural patterns. Yet, few efforts have been undertaken to consistently classify these countries, perhaps since the impacts of recent social and economic upheavals still make it difficult to identify distinct features of welfare state structure.

32 The discussion here will focus mainly on countries that represent the three original types: the social democratic, conservative, and liberal welfare states. This does not mean that an investigation of the Mediterranean welfare state would be fruitless in this context; indeed, much work remains to be done in investigating the role of the Southern Rim states, which show fertility rates among the lowest in the world. Yet, in-depth empirical investigations need adequate data, and most of the quantitative data on Southern and especially Eastern Europe is lim-

social services by the family disburdens the welfare state by taking on some of its prime tasks. Unpaid work, in the form of domestic tasks, care for the elderly, and – most crucial for our topic – childcare, is still essentially female work in these states. Hence, regimes that rely on the private (i.e., female) provision of care offer incentives (for instance in the form of single-earner tax benefits or generous maternal leave regulations) and sanctions (for instance in rationing basic childcare services) that encourage a traditional division of labour. This institutional structure consolidates a paternalist system in which the economic independence of women is undermined (see Orloff 1993: 323). By limiting state services in areas of "genuine" female tasks, mothers are encouraged to stay out of the labour force. Furthermore, incentives for male childcare, which could disburden women in their traditional tasks, are lacking or rare. This also reproduces the social acceptance of traditional gender roles, ascribing care responsibilities to women. Yet, the welfare state compensation provided to female caregivers is far from sufficient to guarantee them economic independence from male breadwinners (see Sainsbury 1996: 36).

Towards a Framework of Gender Differences in Welfare Policies

In differentiating across welfare regimes with respect to the reproduction of gender inequalities, three issues emerge as central:

Welfare policies can address women either as autonomous individuals or assign them a dependent status as caregivers in their role as wives or mothers. This element relates to **(1) gender differences in the social rights of citizenship** as defined in welfare policies. The support offered can either be universalistic and individual-based, or it can address social actors according to their role in central institutions such as the family or the workplace. In the latter case, women are disadvantaged by the extent to which welfare state policies reproduce or mediate an inferior female position in the family or by the extent to which policies restrict female access to the labour market, for example.

However, if welfare state incentives encourage female disengagement from work and discourage the combination of private care and paid work, this recreates **(2) structural disadvantages in female access to the labour market**. In combination with welfare state policies

---

ited – either in its availability or in terms of data content or quality. Hence, the focus here will remain on those countries classified within the three worlds of welfare capitalism.

that address citizens only in their role as members of the labour force, this renders **(3) gender a key element in social stratification**. This is even more important since not only the eligibility for central welfare support is linked to labour market status, but crucial rights and opportunities for economic and social participation are as well. This also highlights the limitations of Esping Andersen's central indicator of de-commodification. "In order to profit from the de-commodifying effects of social policy, women and men alike would need to be commodified in the first place" (Ostner 1998: 229; my translation). Hence, where civil rights are widely reduced to claims by employed persons – which is indeed the case in many welfare states – this also represents a key element of gender inequality.

An Alternative Framework

Taking into account these elements of gender inequality, the core focus of a gender-based welfare regime classification needs to be on the extent to which traditional female dependencies are reproduced by social policies. Lewis (1992) and Lewis & Ostner (1994) classified welfare states into strong, moderate, and weak male breadwinner states, depending on the degree to which they support a family model assuming a breadwinner role for men and a homemaker role for women. Sainsbury (1996, 1999a: 78) also considers traditionalism in gender affairs as central element of the distinction. Under the classical male-breadwinner regimes, strong female dependencies are reproduced by fostering a traditional division of labour between a male family provider and a female caregiver. The opposite pole is taken by individual-centred welfare regimes that offer universalistic support and aim at gender egalitarianism. Intermediate welfare states like France unite elements of these two extremes, combining policies that favour separate gender roles with policies that recognize and address the specific demands of women. A similar conceptual distinction with a gender focuse is provided by Pfau-Effinger (2000: 201ff.). She describes West Germany as a traditional breadwinner regime and Finland as a welfare state that encourages dual breadwinners.

These typologies have in common that they implicitly reclassify welfare states into one of two types, as regimes supporting either:

a) *the patriarchal family model*, by fostering the male role as breadwinner and the economically dependent female homemaker, or

b) *the dual breadwinner model*, by promoting individual eligibility for social support, public provision of family services, and an egalitarian division of domestic labour and care between men and women.

Juxtaposing the conclusions that can be drawn from either Esping-Andersen's theory against a more gender-oriented perspective is more just than an abstract methodological exercise. Developing a welfare typology that fully considers gender issues will contribute fundamentally to the interpretation of cross-national differences in the empirical investigations that follow. And while welfare typologies that rely on gender equality as a prime element of the distinction are far from providing a holistic picture of welfare states (Bambra 2004: 202f.), they do contribute to a framework of cross-national comparison by offering an alternative view that can enhance – rather than replace – Esping-Anderson's distinction.

Implications for Fertility Rationales

In a simplified understanding, welfare policies that encourage a traditional division of labour should work well in boosting fertility: In reproducing a male breadwinner and female homemaker model they suggest a distinct division of gender tasks. In this world, men and women each have their own undisputed domain. At first glance, the fertility effect of incentives that keep the traditional division of labour in place should be anything but negative. However, social policies hardly exist in a social void: instead, they interact with people's internalized norms, perceptions, and aspirations. Quite often, this occurs in a fairly contradictory way. Welfare state incentives commonly foster female investments in education and hence also their participation in paid work. At the same time, ideational shifts foster female claims for autonomy, and – when the welfare state proves incapable of guaranteeing a sufficient level of autonomy – women *need* to establish economic independence by participating in paid work.

Yet, welfare regimes that focus on familialism perceive parenthood primarily as motherhood. Thus, the corresponding policies encourage a female focus on the role of homemaker rather than a labour market attachment on the part of women. This collides with female expectations and goals that have been nourished by earlier incentives to invest in education and independence. Hence, women's reluctance to start a family is also a consequence of contradictory welfare state orientations that aggravate conflicts between individual claims and public incentives instead of alleviating them. "At the micro-level, familialism is now counterproductive to family formation and labour-supply" (Esping-Andersen 1999: 70).

Table 13: Breadwinner Bias across Welfare Regimes

	Germany	UK	France	Finland
Welfare state alignment				
Liberal		✓		
Corporatist conservative	✓		✓	
Social Democratic				✓
Incorporation of the breadwinner model				
Weak				✓
Modified			✓	
Strong	✓	✓		
Female labour force participation				
Low				
Moderate	✓	✓	✓	
High				✓
Female part-time work				
Low				✓
Moderate			✓	
High	✓	✓		
Encouragement of female care provision				
Low				✓
Moderate			✓	
High	✓	✓		
Encouragement of male care provision				
Widely absent	✓	✓		
Low			✓	✓
Moderate				

Sources: Own attributions, supported by the work of Lewis 1992, and Esping-Andersen 1999.

Thus, given a setting where welfare policies foster traditional roles – for example, by rationing public childcare, or by encouraging female labour-market exits and homecare through taxation and leave policies, or by failing to create incentives that encourage male care contributions – women face a simple set of choices when parenthood becomes an issue. First, they can revert to a traditional role, which often negatively affects their labour market engagement and increases their dependence on a breadwinner. Second, they can postpone an according choice to an uncertain future, where "things will maybe somehow work out," or third, they simply reject parenthood in order to maintain their economic independence and autonomy.

3.3 Life Course Regimes

> *" If social scientists want to understand how social forces, constraints, and opportunities shape human lives and if they want to go beyond the universal social conditions of life courses, then three strategies of research can be followed: (1) accounting for within-country differences, (2) tracing historical changes over time, and (3) comparing patterns of life courses across societies, that is, nation-states. I would like to propose that the latter strategy is the most suitable one…"*
>
> Karl Ulrich Mayer (2005: 17).

In its essence, this section (3.3) is devoted to the last of the analytical strategies suggested above. I will shift the focus here to the life-course outcomes that result from the alignment of particular institutional regimes. This strategy proposes a third lens through which to focus on cross-national differences in the institutional impact on the transition to parenthood, and adds a new facet to the a labour market centred distinction among welfare states (3.1), and to a gender-based differentiation among institutional regimes (3.2). It should be noted, however, that all three perspectives – the labour market centred welfare state differentiation, the gender-based approach, and the focus on life course outcomes – essentially rely on similar regime characteristics as a means of identifying systematic patterns across countries. In all three approaches, institutional and structural factors (particularly in the labour market) are observed with respect to their impact on a) persisting inequalities in social stratification, on b) gender inequalities, as well as on c) the biographical consolidation of patterns in individual lives. In this section, the focus shifts to the analysis *how life course outcomes and the resulting conditions of the transition to parenthood co-vary with institutional regimes* (see Mayer 2001: 92, 100f.)

Institutional Makeup and Life Course Outcomes

A key commonality in the institutional shaping of life courses in modern societies relates to the tri-partitioning of the central life stages around work (see Kohli 1985), and particularly to the structuring impact of the welfare state (see Mayer & Müller 1986; Mayer & Schoepflin 1989). On an axis of historical development, life courses today have shifted towards longer duration (and repeated phases) of educational participation, delayed labour market entry, and an increasing discontinuity in occupational trajectories that include unemployment incidence

(see also Section 2.2.2), low income mobility, and high between-firm and occupation mobility. In the private domain, the modern life course paradigm manifests in delayed marriage, a plurality of diverse family forms and living arrangements throughout the life course, a high divorce rate, and especially in delayed family formation and low fertility (see Mayer 2004. 172; see also Section 2.2.3).

Nevertheless, such descriptions of "*the* modern life course" are inevitably oversimplified, since the confrontation of individual goals and resources with institutional and structural constraints creates a high level of cross-national as well as within-country variance in life course outcomes. A summarizing typology of life course regimes cannot replace a detailed analysis of the particular institutional mechanisms *at the national level* that affect and determine life courses in general (see Mayer 2005: 31, 44), and the timing of the transition to parenthood in particular (see Section 4.7). Yet, where labour markets, institutional regulations, and political environments provide a similar frame of reference for human agency across countries (see Mayer & Schoepflin 1989: 191), an integrating typology of life- course regimes can provide a useful heuristic of cross-national regularities in life course patterns. Such a typology may then operate as a starting point for a more detailed analysis of the transition to parenthood in comparing the institutional setups of nation states (see Mayer 2005: 35, 48). This will be done in Chapters 5 & 6.

Returning to the concept of the welfare state as one of the key perspectives on the institutional shaping of life courses (see Mayer & Müller 1986), a series of factors emerge as central: **welfare states structure life courses by providing support and incentives** with a focus on specific life phases. "The state provides nurseries for small children, designs schools for older children, sets rules for motherhood protection, legislates retirement rules, and provides care for the elderly." (Mayer & Schoepflin 1989: 197f.). Furthermore, welfare states offer protection from the risks that arise in specific life phases, particularly among young adults, elderly people, and parents. They set up rules that regulate the timing of transitions and the "integration of sequential roles" (see ibid.: 197) across the life course – particularly in the work-family nexus. Where welfare state support aims at levelling societal stratification and at reducing inequalities by means of universalistic support, as in the case of the social democratic welfare state, this tends to reduce heterogeneity in life courses.

By defining complex sets of rules and regulations, welfare states not only shape life courses directly by providing incentives and opportunities but also by determining frames of reference by which *other* institutions operate. These frames of reference are provided**, first, by defining the limits of institutional responsibilities.**

> "The legal separation between the household and the firm, and the functional division between the family and the school, directly translate themselves into segmented roles of the individual […] This differentiation is the precondition of the structure of the life course in terms of variable participation in segmented roles over the life time." (Mayer & Schoepflin 1989: 195).

Secondly, welfare states define formal and legal rules that also serve as frames of reference for institutional functioning. Market economic institutions are particularly afflicted by the welfare state's array of formal regulations coordinating the interaction between corporate and individual actors in the labour market (see Hall & Soskice 2001: 9, 15). Hall & Soskice suggest a differentiation along the heuristic poles of *liberal* and *coordinated market economies* (2001: 8ff.) in order to conceptualize specific configurations across countries.[33] Importantly, the mechanisms involved pertain to societal organization in the broadest sense and **fundamentally affect the structure of life courses grounded in working life.**

In the former case of ***liberal market economies*,** welfare state intervention is reduced to a minimum, guaranteeing flexible employer-employee relationships. Both employees and firms tend to maximize their short-term returns. Investments in vocational education are not fostered by either the welfare state or firms, which instead tend to reduce or increase staff according to their requirements, whereas employees focus on maximising wages rather than on occupational security. Accordingly, job stability is low, as is loyalty to the employer. There tends to be profound inequality across individuals as well as across the life course (ibid, 2001: 21). This in turn affects the situation in the private domain, where "…decisions regarding marriage and divorce are more closely related to income expectations […and] families are less of a joint project..." (Mayer 2005: 30f.)

---

[33] The differentiation between *liberal* and *coordinated market economies* closely pertains to the situation in the political economy of *liberal* and *continental conservative regimes*, respectively. To a lesser extent, coordinated market economies also resemble the situation in *Scandinavian social democratic regimes*, which, however, deviate from the ideal type of the *coordinated* variety of capitalism by focusing on higher levels of public spend-

In contrast, in ***coordinated market economies***, the welfare state encourages investments in vocational education, guaranteeing a highly qualified workforce. Furthermore, the mechanisms governed by the political economy provide a highly formalised framework that imposes strict guidelines on employer-employee relationships (see Soskice 2005: 172). This frame fosters legal protection of employees, continuous occupational trajectories, and often relies on a strong involvement of trade unions as mediators (see Hall & Soskice 2003: 246). As a result, this provides a setting characterised by a higher degree of mutual trust and reliability, which makes long-term commitments by both employers and employees more profitable. This higher degree of trust and reliance also permeates other domains of societal organization. Life course risks and phase-specific hardships are contained by welfare state support and particularly through well-integrated family networks. The outcomes are more stable and homogenous patterns across the life-course, whereas in liberal market economies, the prevalence and unpredictability of temporary hardships results in less stable patterns (see Mayer 2005: 33).

Institutions and Life Course Risks

In recent years, **increasing deregulation** has been noted in coordinated market economies as well, and particularly in conservative welfare states. These changes manifest in a rising prevalence of flexible labour market arrangements. Job changes have become more frequent, reliable tenure tracks have become more rare, and job stability has decreased. This also affects the rationality of corporate actors to invest into vocational training schemes and encourages flexible staffing that allows companies to hire and fire employees according to situational requirements (see Diewald & Sill 2004 for Germany). This diminishing occupational stability in formerly highly coordinated market economies is also reflected in the context of reduced public employment, mitigating differences between public and private employment (see Mayer & Schoepflin 1989: 200; see also Mayer & Müller 1986: 238-242). During the 1990s, labour markets in many western countries but **particularly in Germany** were moving towards greater **flexibility** and a de-standardization of occupational trajectories, which was accompanied by an increase in precarious employment (see Brose 2003: 591, 595; Mills & Blossfeld 2003; Diewald & Sill 2004).

---

ing and public employment (see Hall & Soskice 2003: 242). Hall & Soskice denote Germany as a main proponent of a coordinated market economy, whereas the US serves as a paradigm for a liberal one (2001: 21-36).

These developments have severe consequences on the structuring of life courses. As in the liberal welfare state, life course patterns tend towards de-standardization. The linkages between status passages such as the exit from education and entry into gainful employment are weakened, and sequence patterns become more discontinuous (for details see Mayer 2005: 33f.) The liberal welfare regime, with its low level of social protection, causes income instability and social disadvantages to produce cumulative effects across the life course, resulting in such phenomena as the "working poor", and increasing poverty. This affects low-skilled workers in particular as well as those in specific life phases such as early adulthood, old age, and parenthood – phases in which people are particularly vulnerable to becoming economically dependent.

Family formation plans are likely to be affected by this institutional impact on life courses. Where precarious employment creates future uncertainties, correspondingly high **life course risks pose a threat** to the stability of future families. Importantly, liberal and coordinated market economies differ fundamentally in the extent to which the welfare state protects individuals from life course risks. Germany experienced an exacerbation of this problem in the 1990s, with adverse shifts in "...the incidence of exposure to risks, especially in the labour market, but also in family life, and the level of welfare assistance given such risks" (Brückner & Mayer 2005: 31).

DiPrete (2002) conducted a detailed analysis of how societal institutions influence the incidence of harmful life course events (including the economic consequences of job displacement, unemployment, and union dissolution) and the extent to which welfare state institutions provide a "cushion", once these events occur. Comparing Germany, Sweden and the US, the welfare state approaches of risk insurance surface in very different life course outcomes. Contrasting Sweden and the US, the latter country has a higher incidence of risks, combined with a lower level of protection for those who are economically dependent, in poverty or in unemployment. Compared to Germany, Sweden has a relatively high incidence of these harmful events as well, but there is strong welfare state protection for individuals who become economically dependent. Among the highest life course risks in the Scandinavian welfare state in general, and Sweden in particular, is the continued neglect of skill investments due to a high level of social protection and ensuing welfare entrapment (see Mayer 2004: 177). In contrast, the German institutional setting results in a relatively low incidence of risks. However, in case

of unemployment, labour market outsiders find it comparatively difficult to re-enter the labour market. Thus, becoming economically dependent due to long-term unemployment is one of the severest risks in the continental conservative and particularly in the German welfare state (see Mayer 2001: 104). Furthermore, German women face a high risk of becoming dependant after a divorce or break-up due to the high institutional incentives to leave the labour force, particularly around the transition to parenthood.

Gender Inequalities in Life Course Regimes

The above distinctions of risk incidence and welfare state support roughly correspond to the exposure to life course risks in the liberal, the Scandinavian social-democratic and the continental-conservative welfare regimes. This complies with Mayer's point that modern life courses "…crucially depend on the institutional configuration and dominant political economy in given countries." (2001, 97f.) As outlined above, women bear the majority of the burdens of parenthood. Hence, for analysing gender differences in the exposure to risks, it is especially important to distinguish to which extent life course regimes treat men and women equally and where institutional alignment aggravates burdens over the female life course.

Male-female differences in exposure to displacement and unemployment are the lowest under the **Scandinavian regimes,** which pursue gender equality. The institutional setting is designed to provide equal treatment to men and women and across different life phases such as parenthood. This is achieved by encouraging female labour market participation and by minimizing role conflicts. In the context of the transition to parenthood, this means that adverse consequences of parenthood are cushioned by protecting mothers from income or career development setbacks as well as from the risks of poverty by providing public and by encouraging paternal childcare.

In contrast, the **liberal regime** lacks an institutional configuration that alleviates female burdens. Nevertheless, women commonly work full-time and face almost equal employment opportunities to men. This is, however, less the consequence of an intentional design of welfare state institutions to achieve gender equity than it is the result of labour market demands for female employees and of families' economic needs to supplement their incomes, particularly among low income groups (see Mayer 2001: 103).

In coordinated market economies with **conservative welfare regimes**, the institutional organization of social policies (taxation, health care, unemployment, or more generally social security) effectively operates in decoupling male work careers from female family careers (see Moen 2003: 238). In organizing "life courses around the nuclear family" (Mayer 2005: 43), the conservative and particularly the German welfare state provides different life course scripts for men and women. Yet, various incentives and sanctions promote a female engagement in both occupational and familial roles. In coping with the resulting life course risks and future uncertainties, a favoured strategy is to *delay* the irreversible and thus time-consuming transition to parenthood, or to focus on *either* career *or* family. While market and educational institutions increasingly foster female skill investments and labour market attachment, institutions in the conservative regime that ascribe traditional gender roles (e.g., by regulating child leave, restricting public childcare, and defining norms of maternal childcare) continue to encourage women to leave the labour market (see Mayer 2004: 177). Where the conservative life course regime ignores the increasing female labour market attachment, this results in an increased tendency towards de-standardization of the paths leading to family formation (see Brückner & Mayer 2005: 48).

Table 14: Institutional Regimes and Life Course Outcomes

	Key Addressee	Life course Sequences / Organization	Life Course Risk	Gender Equity
Liberal Market State	Individual	Discontinuous / De-Standardized	High Incidence Low Protection	Private: Moderate Market: Moderate to High
Continental Conservative Welfare State	Family	Continuous / Standardized	Low Incidence Moderate Protection	Private: Low Market: Low
Scandinavian Social Democrat. Welfare State	Individual	Continuous / Standardized	Moderate Incidence High Protection	Private: High Market: High

Sources: Mayer 2001, 2004 & 2005; DiPrete 2002.

Yet, the **case of France** shows that national particularities play a decisive role, as the institutional setting of the French welfare state deviates significantly from the model of the conser-

vative welfare state with respect to market and life course outcomes (see Mayer 2001: 100; Mayer 2005: 35; Soskice 2005: 177), and particularly with respect to the transition to parenthood. In France, the institutional setting is characterised by lower norms of maternal care and higher coverage of publicly provided childcare. This generates female life course patterns with a higher incidence of transitions to parenthood, full-time employment, and most importantly of a parallel combination of the two (for more details, see the following Section 3.4).

As was shown above, "… a plausible argument can be made that major institutions and a series of life course outcomes do in fact cluster to a considerable extent." (Mayer 2005: 35). Where the conservative welfare regime provides more stable life course conditions by insuring against risks and by increasing mutual trust in both private and market affairs, the liberal regime provides a higher level of gender equity, through female labour market integration. Nevertheless, distinguishing different life course regimes by summarizing the main types of welfare and corresponding life course regimes (or the dominant mode of coordination in market economies) only provides a heuristic that must be corroborated by more detailed analysis of specific national path dependencies (see Mayer 2001). In addition, it is necessary to further examine country-specific arrangements of social policies and the specific cultural background in their role in mediating life courses (see Mayer 2005: 35). These issues will be discussed in more detail in the following sections (3.4 & 3.5; for an overview of the impact on societal organization and life course outcomes at the national level, refer to Mayer 2005: 40f.).

3.4 The Impact of Culture on Welfare Regimes and Fertility

> "[…] Fertility behaviour reflects the cultural representations people have; as these change, fertility change will follow." (van de Kaa 2004a: 9).

I will argue in this section that the cultural representations that predominate within a society fundamentally affect fertility behaviour and that the welfare state takes a central role in mediating and reproducing the related cultural values (see also Mayer, Wagner & Featherman 1989). Many of the ideational changes referred to in Section 2.2.3 describe fundamental changes in cultural patterns with an increase in postmaterial values in modern societies. This

section, however, focuses on the cultural impact on fertility behaviour as mediated by welfare state policies. This is done in order to further explore cross-national differences in fertility regimes and the nature of the welfare state in shaping the underlying fertility decisions. This follows the assumption that traditional cultural values, especially in the form of religious sentiments, have interpenetrated welfare state institutions and shape legislation and policy measures to this very day.

The essence of cultural change fundamentally determining fertility behaviour today is represented by the "...reduced legitimacy of normative regulation and authority, increased secularism and individual ethical autonomy, and above all growing respect for individual choices and hence increased tolerance for alternative life cycle structuring" (Lesthaeghe & Moors , 2000: 122). Social policies have responded to these changes, for example, in the legalisation on abortion and the recognition of unmarried or homosexual couples in welfare policies. Yet, these policy adjustments remain incomplete when measured against postmaterial values held by individual social actors (see Moen 2003: 243). Welfare state institutions embody the cultural repertoire of a society, but they show a great deal of inertia when confronted with social change (see Mayer 2005: 17). They may therefore continue contributing to declining fertility, particularly where the welfare state's reproduction of traditional values directly contradicts the needs of people – especially the needs of women in modern society to participate in education and gainful employment.

Most of the examples provided in this section refer to a comparison between Germany and France. According to Esping-Andersen, Germany and France are both continental conservative welfare states and thus share numerous traits. Yet, important differences exist in areas that are crucial with respect to fertility development (see Mayer 2001: 100f.): for example, relating to the cultural and historical background and especially to prevailing religious traditions and secularization. For these issues, it will be important to understand the combined impact of cultural background *and* welfare policies on fertility behaviour.

Interrelation of Culture, Welfare Policies, and Human Behaviour

The distinctions outlined in Sections 3.1, 3.2 & 3.3 offered perspectives on what constitutes and distinguishes clusters of institutional regimes in shaping human lives – either with a labour market focus in the tradition of Esping-Andersen, with a gender-specific focus as suggested by authors like Lewis and Sainsbury, or with a focus on life course outcomes as

stressed by Mayer or DiPrete. In identifying the underlying forces, the cultural background of a society emerges as a common denominator across similar welfare regimes[34]. Identifying such roots, however, goes beyond simply tracing the cultural origins of the modern welfare state: while welfare state incentives directly affect individual fertility behaviour, the cultural background also affects the set of values and norms that individuals adopt and internalise. Hence, these cultural impacts structure fertility choices as well (i.e., culture shapes individual behaviour, see Hammel 1990: 458ff., DiPrete, Morgan, Engelhardt & Pacalova 2003: 448). At the same time, the individual's representation of cultural values may also affect the acceptance or rejection of specific policy measures, for example, if measures embody values that have become obsolete due to social change (see also Pfau-Effinger 2000: 233). In turn, social policies themselves may also be capable of slowly changing cultural patterns through the agency of individuals (i.e., social actors shape cultural patterns, see Hammel 1990: 457) by offering incentives capable of slowly shifting individual attitudes and altering individual values, which may eventually translate into the cultural repertoire of a society (p. 72 will provide some examples).

Importantly, the cultural background shapes both individual attitudes and institutional contexts (see Hall & Soskice 2001: 13f.) Yet, the individual's interrelation with culture *and* institutions is not monocausal but interdependent (Hofstede 2001: 20). "Man (not, of course, in isolation but in his collectives) and his social world interact with each other. The product acts back upon the producer." (Berger & Luckmann 1966: 78). These concepts outline the background of a multi-level perspective that serves as a foundation for the theoretical framework used to understand individual fertility behaviour in this contribution. The focus clearly rests upon the micro-foundations of such a framework, which will be outlined in detail – also with respect to the intertemporal aspect of fertility choices – in Chapter 4.

---

[34] A concise definition of what constitutes culture may be helpful at this point, as the concept of culture used here serves to distinguish between national particularities: Anne Swidler (1986a: 273) defines culture as "…everything one would need to know to become a functioning member of society". This essentially outlines a social context with shared symbols, communicative systems, rituals, world-views, and a set of common values (see Hammel 1990; Swidler 1986a). Kluckhohn (1951: 86) stresses furthermore a historically developmental perspective according to which "…the essential core of culture consist of traditional (i.e., historically derived and selected) ideas and especially their attached values."

Acceptance of Public Care as an Example of Culturally Embedded Norms

> "Norms and attitudes about childcare lie at the heart of the concept of role incompatibility. […] In short, the more maternal supervision that norms prescribe, the greater the role incompatibility and, hence, the stronger the negative association between fertility and female labor force activity" (Brewster & Rindfuss 2000: 287).

The following discussion of public care provision in Germany and France is intended to exemplify the interrelation between culturally anchored norms, institutional setting, and individual fertility rationales. In Germany, work-family conflicts are considered to be severe since the supply of public childcare is seriously limited, especially in West Germany. Anticipated work-family conflicts of parents-to-be (as indicated by the rationing of spaces in childcare facilities) are expected to affect the likelihood of family formation negatively. Yet, in West Germany, regional variation in the supply of public childcare does not translate into regional variation in first birth risk, whereas a relation between higher fertility and higher coverage of childcare can be observed among East German regions (see Hank, Kreyenfeld & Spieß 2004). The answer to this seemingly contradictory finding is likely to lie in the fact that in the GDR, the role of the working mother was promoted as a Socialist ideal, which over the decades established itself as a societal norm. A generous supply of public childcare was provided, and even more importantly, public care became socially accepted. In West Germany, however, a low coverage of childcare institutions was and is closely linked to the traditional perception of women as the prime care providers. Even in the case of female employment, childcare remains primarily in the *private* sphere, where people activate their networks of close kinship, especially grandparents, rather than seeking public childcare options (see Bien, Rauschenbach & Riedel 2006 ; see Aaberge et al. 2005 140 for Southern Europe and especially Spain). The situation reveals two distinct cultural patterns: first, a profound reluctance to place one's offspring in public custody and second, strict norms assuming *maternal* care as a crucial prerequisite for child-well-being[35] (see DiPrete et al. 2003: 446).

The pronounced manner in which the German institutional system evokes intense contradictions between the role of the working woman and the female caregiver is also highlighted in direct comparison to France. In Germany, traditional family structures are subsidized. Not

[35] Brewster & Rindfuss (2000: 280) report that similar norms of extensive maternal childcare involvement can be found in Japan.

only does this disburden the welfare state from care obligations[36], it is also a consequence as well as a reproduction of culturally embedded norms that convey the role of the maternal carer. This differs in France: the advanced secularization of French society has given rise to a distinct universalism that promotes gender equity throughout the public sphere. This is not to say that fundamental equality of gender roles has penetrated social relations in France to a similar extent as for instance in the Scandinavian countries. Indeed, Catholicism has left its imprint on gender relations in France as well (see Veil 2005: 90). However, traditional role perceptions are relegated there to the private sphere, while social policies address women and men universally rather than assuming gender-specific roles in the distribution of public support. The welfare state is oriented toward female employment as normality, which is also reflected in the professionalization of care provision[37]. Historically, the French welfare state is much more involved in areas of life such as childcare, which in Germany are both the duty and prime domain of the family, and more specifically, of the female caregiver. The long tradition of Republican policies in France have led to a culture where state support is accepted in areas where German families show a great reluctance to accept any state interference. Where the French welfare state is suspicious of families monopolising areas of life that are crucial for the socialisation of laicism (such as childcare), the German family is suspicious of the welfare state interfering in its most private concerns. This applies especially to public infant care, which is widely accepted in France, while in Germany social norms perceive infant care as a strictly maternal role (see Dienel 2003; Veil 2005)[38].

---

[36] Accordingly, the supply of childcare and day-care in Germany remains drastically underdeveloped in terms of coverage and availability (see, for example, Huinink & Mayer 1995; Brewster & Rindfuss 2000: 287ff.).

[37] A similar model is found in the Scandinavian countries, where high-quality care is provided also as a *pedagogical* opportunity intended to disburden working parents (see Hoem 2005: 569). But the Swedish model lacks the focus of the French model, which aims to provide a public counterweight to the family monopoly on childcare.

[38] This rigid stress on norms of maternal care in Germany is also highlighted by the term “Rabenmutter” which describes a woman who neglects her maternal tasks. This is a genuine German expression that has no equivalent in most other modern languages. Additional evidence can be found in the proportion of adults who agree that a “a preschool child suffers if the mother works”. In Germany the proportion who agreed with this statement in 1991 was, at 76%, almost twice as high as in the US (see Rindfuss et al. 2003: 416; database: “New Ways to Work Survey” of the European Commission, 1998).

Activation of Paternal Care

Another area where the culturally embedded role of the female carer is reproduced by family policies is the activation of paternal care resources. In 1995, as little as 5% of the fathers in the European Union took advantage of parental leave benefits (see Aaberge et al. 2005: 137). Family policies in France and also in the Scandinavian countries have played a pioneering role in offering additional paternal leave schemes offering fathers paid leave shortly before and after birth (so-called "daddy days", see Hoem 2005: 567 with reference to Sweden). Such measures aim at actively encouraging male involvement in childcare. Similarly, they reflect the social acceptance of a departure from the sole female carer model and a shift toward shared parental roles in particular and more egalitarian gender roles in general. In Germany, leave policies aimed specifically at fathers are virtually non-existent. The replacement of the general parental leave ("Erziehungsgeld") – which is taken almost exclusively by mothers – with the so-called "Elterngeld" in 2007 (an employment-oriented leave that offers a 2/3 income replacement) was preceded by heated public debate. The new leave policy includes a regulation whereby the twelve months of paid leave can be extended a further two months if the father takes at least two month of the leave. This measure, which deliberately aims at nurturing more egalitarian gender roles by promoting paternal care, is part of the standard repertoire of family policies in the Scandinavian countries[39] (see Hoem 2005). In Germany, however, the legitimacy of policies to encourage paternal care has been the subject of extensive public debate. The controversy around this issue suggests how deeply traditional gender roles are embedded in German culture, but it also reveals a strong reluctance in German society towards state interference in matters as private as fertility and care choices.

Separation of Public and Private Sphere

Indeed, the strict separation between the public and private sphere and the rejection of state interference in private affairs is an important cultural characteristic of West Germany. Particularly the German experience with National Socialism led to a profound reluctance to accept any policies or schemes suspected of aiming to change individual childbearing rationales: "In Germany, everything connected to population or population policy bears the odium of be-

[39] Studies for Sweden show that the father's uptake of parental leave is positively associated with the propensity of subsequent births (see Oláh 2001;Andersson 2005: 10).

ing state propaganda, which was undoubtedly the case in the 1930s" (Mackenroth 1953: 1, my translation)[40].

In contrast, the broad provision of public childcare in France is more than just an offer, intended to relieve the burden on families. In providing care, the welfare state takes on the role of an expert providing services that are in no way inferior to those of families. This view emerged from the republican model of public childcare and schooling as a counterweight to familial education, and was intended to further diminish the Catholic influence on children's socialization (see Veil 2005: 91). Historically, the French welfare state perceives the education and care for future citizens primarily as "une affaire de l'Etat" (Veil 2005: 95). This view has its origins in the Third Republic and has left its imprint on *cultural patterns in the separation of public and private sphere*, leading to less strict norms of exclusive maternal care and to a general acceptance of public childcare[41].

Understanding how public acceptance of state involvement in private matters is rooted in the cultural historical background also helps to understand why expansive population policies do not arouse scepticism in France (whereas in Germany, only slight hints in this direction provoke debates; see Neyer 2003: 49). Monetary transfers like the *Allocation Parentale d'Éducation* (APE)[42] are deliberately aimed at encouraging large families. Public childcare and especially infant care is offered and accepted, whereas in Germany, this remains the domain of the family (see Dienel 2003). In France, population policies blend into the cultural historical background. Germany civil culture is generally incompatible with pro-natalist policies and particularly with state involvement in family matters and with any challenge to the exclusively female role of caregiver. This scepticism, however, is common in many European

---

[40] Original text: "In Deutschland ist alles, was mit Bevölkerung und Bevölkerungspolitik zusammenhängt, mit dem Odium belastet, eine Angelegenheit der staatlichen Propaganda zu sein, was es in den 30er Jahren zweifellos auch war" (Mackenroth 1953: 1).

[41] In effect, this results in the strong labour market integration of French women. In contrast, in Germany and to a lesser extent in Britain, the welfare state widely refrains from interference in female domestic care. Hence, the labour market attachment of women is weaker, which is also reflected in a high proportion of women working part-time. "Strong male-breadwinner states have tended to draw a firm dividing line between public and private responsibility." (Lewis 1992: 164).

[42] This is an income-based childcare allowance that offers generous monetary support for families with two and especially three or more children. The APE applies only to second and higher-order births. One of the parents receives a monthly benefit of about 500 euros (given two years of preceding employment) for a period of three years. For the third and higher-order births, the amount of benefits is increased even further (see Laroque & Salanié 2003: 1).

countries. There is a "…widespread suspicion, especially among women, that any activist policy seeking to encourage higher fertility would tend to send women back to their homes and aim at re-establishing male dominance in the family and society at large." (Chesnais 1996: 734; see more generally Aaberge et al. 2005: 127).

Cultural representations determine the acceptance of welfare policies, which are shaped by the anticipated public response[43]. In the long term, however, welfare policies can also influence the cultural repertoire of what people accept and reject as the societal standard. One example is the introduction of the so-called "Babyjahr"[44] in the GDR during the mid-1970s: By offering more time off work to mothers, this scheme also resulted in a revival of traditional norms of maternal care in the GDR (see Trappe 1995: 123f.). This also demonstrates how policy aims can shift from encouraging mothers into full-time work back to the old female caregiver model. Nevertheless, it should be stressed that the scope of such policy changes is limited, as cultural-normative patterns, once established, provide relatively stable patterns. In Finland, a complex interrelation among individual values and an array of welfare state incentives has established a culture of the *working mother*. Unlike in West Germany, where the *male breadwinner* culture is particularly dominant, work interruptions of mothers in Finland rarely exceed one year following childbirth, although welfare state support would cover a longer duration (see Pfau-Effinger 1996: 482). And also in East Germany, the Socialist tradition of working women has left a legacy of higher acceptance for combining work and motherhood there than in the West.

The Impact of Secularisation on Traditionalism in Gender Relations

Norms of maternal care, as incorporated into the cultural repertoire of a society, are closely related to the persistence of religious sentiments. Such sentiments frequently incorporate the notion of a hierarchical structuring of families, resulting in a relegation of women to what is perceived as their "natural" role according to the internal logic of such hierarchies (see also Lewis 1992: 161). It should be noted that this does not necessarily apply to religion per se.

---

[43] With respect to population policies, this also seriously undermines Demeny's (1986: 476) argument that societally advantageous demographic behaviour needs to be perceived as a "public good" that is the legitimate object of governmental action.

[44] The "Babyjahr" introduced in the GDR was an annual period in which mothers could reduce their working hours and take extended periods off work (see Opielka 2002).

However, the religious values incorporated into the cultural fabric of industrialized societies are usually either predominantly Catholic or Protestant. While Catholicism tends to support traditional patriarchal hierarchies and limit female autonomy, Protestant values have also played their part in restricting women to the caregiver role within the bourgeois family (see Pfau-Effinger 2000: 231ff.; Hofstede 2001: 329; Kalmijn 2003: 312). Where such religious attitudes prevail, the traditional role expectations for women collide with the striving for individuation and autonomy in modern societies (whereas the regions with a Catholic majority are more traditional than the Protestant regions; see Hofstede 2001: 114; Kalmijn 2003: 315; 335). "Changes in family and fertility [...] occurred earliest and most rapidly in areas where the influence of organised religion was weakest and secularization was strongest" (Blossfeld 1995: 11). But meanwhile, the countries that have progressed furthest in secularisation show the highest effectiveness in alleviating contradictions between the domains of family and work. In their recovery from fertility decline, these countries today show some of the highest fertility levels in the industrial world.

Individual religious attitudes and traditions are important determinants of fertility behaviour. Where such religious sentiments are still prevalent in individual relationships, they surface as traditional gender role attitudes or even in an incomplete decoupling of sexuality from the sphere of reproduction (see Lesthaeghe & Surkyn 1988: 9f.; Hofstede 2001: 329). Yet, secularization by definition also includes the extent to which religious matters have been excluded from state affairs and legislation. The more secularised welfare states have invested more substantial effort in addressing social actors *directly* in policies designed to support more egalitarian gender roles, both by alleviating female dependence and by weakening the ability of the traditional family to develop hierarchical structures along gender lines (see Orloff 1993: 304f.; Pfau-Effinger 2001: 3f.).

However, welfare policies are generally prone to evoke contradictions when they lag behind in adopting to new individual values in adjusting to social change. This is true when religious sentiments have been widely banished from individual attitudes, while welfare state incentives still remain fundamentally shaped by religious ideals that effectively enforce traditionalism in gender relations. The result of such an asymmetrical secularization between individual attitudes and welfare state incentives can be observed, for example, in Spain. There, adherence to the values of individual planning autonomy for men *and* women translates into a

"...rhetoric of an attitudinal commitment to egalitarian gender roles" (Hobcraft 2004: 82) . Yet, family relations and fertility behaviour are still shaped fundamentally by the contradictions of the traditional structures reproduced in welfare policies. The Catholic imprint on social policy as seen in Spain plays a major role in the Southern Rim countries, and, to a lesser extent, in some of the corporatist conservative welfare states. Symptomatic of the situation in these countries are the aggravated conflicts women face between work and family (see Blossfeld 1995: 11; Hobcraft 2004: 82). The effect of this on fertility behaviour is a long postponement of family formation and steeply inclining levels of childlessness, especially in Spain and Italy but also in Germany.

While religious cultural elements generally exert a traditionalising effect on sex roles, the Protestant influence is certainly less traditional than the Catholic one [45], to which the following examples will refer (see Höllinger 1991: 754; Hofstede 2001: 114; Kalmijn 2003: 315, 335). Yet, it should be noted that although some societies have only one dominant religion, many industrialized countries like Germany and the Netherlands have inherited a mix of Protestant and Catholic influences (see Pfau-Effinger 2000: 232f.). But particularly in areas, where the Catholic impact still echoes on, various elements tend to place contradicting role demands on women. These include the promotion of an (undisputable) patriarchal order in society in general and in families in particular, the perception of traditional families as core element of society, and – in particular – a reluctance to accept conjugal living arrangements outside of marriage or out-of-wedlock births. Germany may serve as an example of this. Many benefits provided by the tax, social security, and health care systems are directed to married couples. All efforts to extend those benefits to *all* parents (regardless of legal status) have been dismissed with reference to the constitutionally anchored protection of the marital union (see Hoem 2005: 568ff.). Still, the crucial issue is that the policies mentioned essentially operate in relegating the married wife to the homemaker role, which goes hand-in-hand with her economic dependence.

Especially in countries that combine a Catholic history with a distinct tolerance for vestiges of patriarchal ideals in welfare policy, incentives tend to promote traditional sex roles. Although gender equity is part of the public rhetoric of basically all modern societies, this kind

of culture-based paternalism is still reflected particularly in leave regulations supporting *maternal* care and in taxation and childcare policies (see Orloff 1993: 322f.). Combined with the more limited labour market opportunities of women relative to men, such policies actively discourage female labour market participation (see Arts & Gelissen 2002: 141f.) while encouraging traditional hierarchies in families with a female caregiver and male breadwinner.

Instead of challenging these elements that develop a disintegrative force at the individual level, the modern welfare state attempts to preserve them in order to delegate some of its burdens to the families. "At the heart of Catholicism's subsidiarity principle lies the ideal of large, well integrated, stable and responsible families. Yet, as things stand today, two Catholic countries – Italy and Spain – boast the world's lowest fertility levels while the most defamilialized welfare regimes in Scandinavia rank among the highest in Europe" (Esping-Andersen 1999: 67). The costs of solving the underlying contradictions are left to the individual, which results in structural incompatibilities between fertility plans and other aims and demands of women in modern societies. In contrast, the efforts of welfare states to strengthen families as a safe haven for children appear to dissipate without bringing about any major positive effect on fertility in the countries mentioned.

The example of France underscores the importance of distinguishing between secularization in private and in state affairs: while Catholicism has played a major role in French history, industrialized France and especially the France of the Third Republic has profoundly banished religious ideals and values from all matters of the state. In fact, the secularization of state affairs has perhaps progressed further in France than in any other country in Europe. This is not to say that gender relations in France are completely free of traditionalism, but *French welfare policies* do treat women and men equally. They encourage female labour market participation as well as care outside the family, which shows that role models based on religiously motivated ideals are widely absent from social policies.[46]

As a concluding remark, it should be stressed that the intention of the above section was not only to outline the cultural anchoring of fertility behaviour. It has also shifted the focus

---

[45] Kalmijn (2003: 315) assumes Orthodox Religions to be the most conservative. Yet, their prevalence in Europe beyond Greece and Eastern Europe is rare.

from a general description of patterns and national particularities concerning the cultural background and specific welfare policies, **towards an understanding of how the resulting institutional setup triggers individual responses that affect fertility**. These institutional contexts will be dealt with further in the next section by analyzing their structuring impact on life courses in general and on the transition to parenthood within biographies in particular.

3.5 The Impact of Policy Regimes on Fertility

This section aims to offer a more in-depth view of how specific family – or more generally – social policies affect fertility, and a brief discussion of why some of these schemes seem to work at fostering fertility, while others do not. The key goal is to address the fundamental question of whether specific policy measures are capable of supporting individuals in their plans for family formation at all. Extending this perspective, the present section discusses how the *interrelation and integration of particular policies* affects fertility.

Contemporary social research is far from having reached consensus on whether social policy regulations are actually capable of regulating fertility. As a first step, I will highlight countries where particular policies or combined measures have been designed with the deliberate aim to affect gender relations in general and fertility in particular. It should be kept in mind, however, that social policies are vulnerable to cause unintended effects on the fertility rationales of the addressed actors, possibly resulting in a distortion of the original policy aims. As a first step, I will distinguish between high and low fertility countries of the industrialized world in order to identify which policies have proven capable of enabling individuals to achieve their fertility plans.

Policy Regimes and Fertility – An Overview

Perhaps the most distinct example of population policies can be found in France. There, a broad range of policies has been designed and aligned with the deliberate aim of boosting family size and hence fertility. The ***Scandinavian countries*** differ fundamentally from this

[46] Some authors argue, however, that in France, the disburdenment of the female caregiver is in fact a consequence of pro-natalist policies and that the male breadwinner is still implicitly present in social policies (see

picture by deliberately *not* incorporating any pro-natalist ideals or incentives into their array of policies (see Hoem 2005: 569; Andersson 2005: 1; Björklund 2006: 5) . Despite this fundamental difference in the policy approach to fertility, Nordic countries such as Sweden and Finland also show fertility rates close to replacement levels[47]. In both France and Sweden, family sizes beyond two children are much more common, and the proportion of childlessness is much lower than in Germany, Italy, or Spain (see Huinink 2002). The primary aim, particularly of Swedish policies, is to encourage and support men and women alike in the realisation of their life goals (see Hoem 2005; Neyer 2003), while any reference to pro-natalist ideals is utterly absent. Both family formation and the participation in paid labour (either as means of self-actualization or economic autonomy) still rank among the most important life goals for both men and women in these countries. The Scandinavian welfare state puts much effort into making these goals reconcilable, particularly for women. The result is a battery of policies that strengthens labour market attachment, that closely links eligibility for parental benefits to previous labour market participation, and that supports the parallel combination of work and parenthood[48] (see Hoem 2005: 569f.; Andersson 2005; Björklund 2006 : 8f.) The close link between parenthood and employment and the incentive structure of Scandinavian family policies, however, renders fertility in the Scandinavian countries vulnerable to the economic cycle, as demonstrated by the example of Sweden and Finland during the 1990s. At that time, recession led to a temporary postponement of fertility (see Andersson 2000; Hoem 2005: 562f.).

Lewis 1992: 162).

47 Finland and Norway show some deviations from the ideal type of the Scandinavian welfare state. Lewis (1992: 162) highlights that the Norwegian welfare state shows similarities to the British and German models in treating women primarily as wives and mothers. In fact, both Norway and Finland have since introduced home care allowance schemes as part of their family policies. Nevertheless, broad access to publicly provided childcare remains untouched and female labour force participation rates remain on a constantly high level.

48 The array of measures exists in virtually all Scandinavian countries but is especially wide in Sweden. There, parental leave schemes in 2005 offered an 80% income replacement for 13 months (see Hoem 2005: 567; Björklund 2006). Additionally, Swedish speed premium policies encourage closer spacing of children, limiting the period off work (see Andersson 1999; Andersson 2004). Most importantly, women are disburdened from traditional care duties. This is achieved by encouraging male participation in care through financial and leave-related incentives (as addressed in special leave regulations for fathers, particularly “daddy days” – time off work immediately after childbirth; see Hoem 2005: 567). Finally, the egalitarian model enables women to work by offering high quality childcare and daycare facilities with a high level of coverage and flexible opening hours (see Björklund 2006: 9f.).

A contrasting picture is offered by most of the ***continental*** and especially ***Southern European*** welfare regimes. Although they incorporate a strong family orientation in their policies, they fail fundamentally in creating an environment that supports the realization of individual childbearing plans (see Kohler et al. 2002: 667). One of the key reasons identified for the ineffectiveness of both continental conservative and Southern European welfare states is their encouragement of traditional family structures. Accordingly, the supply of public childcare and daycare remains drastically underdeveloped (see Kohler et al. 2002: 665). The resulting gendered division of labour collides with the contemporary life goals of women. Furthermore, most of the welfare state policies in societies based on a traditional family model are characterised by a political consensus that places high priority on subsidising families. This reflects the religious beliefs on gender roles and gender hierarchies implicitly embedded in the legislation of these only partially secularized welfare states. There is no overarching policy goal – such as population expansion in France or egalitarianism in Sweden – that is capable of having an impact on fertility behaviour. What is also missing is an awareness of the way in which different policy measures interact in fostering or hindering the realisation of individual fertility plans. In fact, the political stage dedicates effort on achieving consensus on the level of specific benefits and on the distribution across interest groups, while failing to clearly specify the policy aims behind the monetary support (see Hoem 2005: 568). Policies that might be capable of affecting fertility rationales are created in a piecemeal fashion rather than being tailored to achieve an overarching goal (see ibid, 2005: 566).

Policy Regimes and Fertility – The Liberal Welfare State Paradox

The ***liberal welfare states*** are a special case regarding the relationship between social policies and fertility development. Paradoxically, these countries – although lacking a clearly formulated policy on fertility or gender issues – show fertility rates that range from moderate in the case of the UK (with an average of about 1.7 from 1990 to 2000, see Council of Europe 2006: 78) to the highest rates in the industrialized world in the cases of Ireland[49] and the US. A closer look at the UK and the US raises even more questions to this paradox than it answers:

[49] Fahey (2001) argues that the conditions of economic recession that had led to fertility decline in Ireland resembled the conditions in mosst other industrialised countries by the 1990s. In Ireland however, the effects were limited mainly to restricting higher parity births, while a persistent cultural ideal of having at least one or two children has kept fertility near replacement levels (Fahey 2001: 177).

in these countries, welfare state support is generally limited, in terms of both financial support to parents and publicly provided childcare[50]. The main form of childcare is in fact expensive market-based childcare, which for many is not affordable (see Kamerman 2000: 3). Furthermore, the job return guarantees contained in general leave policies are much more rigid and shorter in duration than, for instance, in Germany or the Scandinavian countries. In fact, the US policy strongly encourages economically dependent women to return to work when their child reaches the third month of age (see ibid. 2000: 3), while social protection covers only the most severe economic risks and hardships.

This aggravates the situation of individual level contradictions: the lack of affordable public childcare options enforces the female caregiver role, while the limited economic support for families encourages dual-earner couples to provide for the family rather than relying on the limited government benefits. Hence, female labour force participation rates are high and periods of absence from the labour market after childbirth are among the shortest in the industrialised world, especially in the US. Yet, childcare remains primarily a female task. Unlike in the US, in the UK, this conflict is resolved by combining maternal care duties with part-time work (similarly to Germany, see DiPrete et al. 2003: 449). The neoclassical model suggests that the collision between market and family roles commonly results in a restriction of fertility. Paradoxically, fertility remains exceptionally high in the UK and especially the US.

One possible solution to this contradiction might lie in cultural and social structural patterns: in many liberal welfare states, latent religious beliefs manifest themselves in the discouragement of pre-marital sex and often severely limited sexual education (for a discussion, see Lesthaeghe & Neidert 2007: 382ff.). The results are rates of teenage motherhood that rank among the highest in the industrialized world (see Cigno & Ermisch 1989 for the UK). Although this does not completely explain the comparatively high fertility rates in the UK and especially the US, it does account for part of this phenomenon. Additionally, in the US, the high fertility rates of ethnic groups including blacks (TFR around 2.1) and especially hispanics (TFR 2.7-2.9) play a non-negligible role (see Lesthaeghe & Neidert 2007: 413ff.)[51].

---

[50] Yet, the US invests major efforts in creating tax credits that reduce the costs of having children (see McDonald 2000: 13).

[51] In recent years the TFR of the non-Hispanic White population was around 1.8. Though this level still rests replacement, it has settled well above the fertility rate of most other industrialized countries (see Lesthaeghe & Neidert 2007: 414).

Within these groups, factors such as immigrant status and ethnic and cultural background culminate in lower average educational attainment, which in turn channels into lower mean age at childbirth and larger family sizes (see Morgan & Yang 2002). Simultaneously, one important factor promoting fertility among educated and highly educated working professionals in the US is the availability of childcare not only from costly professional care providers but also from low-wage, undocumented immigrant workers (see McDonald 2002: 417).

These issues may help to explain some of the differentially higher fertility in these countries. Yet, considering the limited government support of parenthood in the US and the UK, the pronounced contrast in fertility behaviour to countries like Italy and Germany remains puzzling. The following hypotheses provide some possible explanations for the exceptionally high fertility in liberal welfare states.

- *A limited ability of the welfare state to reproduce traditional roles:* policy support for parenthood is generally very limited in the liberal welfare state. Thus, policy incentives have a limited ability to enforce traditional gender roles, and hence to enact a female dependence on a male breadwinner (see Soskice 2005: 176f.) Where family policies in the US and UK do encourage a gendered division of labour, they remain limited in their level and scope. Government benefits providing protection only against the most severe risks, and are limited to the most needy.
- The male breadwinner model is encouraged implicitly by not providing the kind of welfare state support that would support women in reconciling work and parenthood (for example, in terms of public childcare provision; see Lewis 1992: 162f.). Yet, such a limited system of support, is also incapable to create strong incentives affecting fertility rationales such as those contained in the German leave policies (prior to the so-called *Elterngeld*), actively encouraging traditional gender roles by fostering a retreat of mothers from the labour force. Accordingly, DiPrete (2002) and colleagues as well as Morgan (2003: 596f.) conclude that – given the incentive structure of the institutional makeup – the overall costs of having children in Germany are higher than in the US, despite the relative generosity of German family policy.

  Where a (traditional) gender role model relevant to fertility exists in the policies of the UK or the US (see Lewis 1992; Sainsbury 1996), those policies do not have the scope capable of providing incentives that would achieve the desired results. Indeed, infant child-

care services are utilized much more in the UK and especially in the US than in Germany – despite the higher costs due to market provision[52]. Obviously, culturally embedded norms of maternal care are less dominant in the liberal welfare state, which has inherited a labour market-focused culture of *working women* (see Hall & Soskice 2001; OECD 2001a: 144f.; DiPrete et al. 2003: 449f.; Soskice 2005: 176) Thus, market empowerment in the liberal welfare state also includes the encouragement of dual earner households[53]. This is also reflected in the fact that women and men are treated basically as individuals in labour market policies and taxation, which effectively promotes female autonomy (see Apps & Rees 2003).

- *The welfare state's role in shaping risk attitudes:* given the very rudimentary protection against economic (especially labour market) risks, precarious economic situations and insecurity are a much more common experience in the US and UK. This may affect attitudes regarding what circumstances are considered acceptable for family formation. This could cause people to start a family in earlier life-phases, in which actors in societies with higher levels of welfare state protection would deem the economic conditions to be inappropriate for family formation.
- *Labour market insecurities and fertility behaviour:* Labour market risks are generally higher where welfare state regulation is low. However, labour markets that are more flexible are generally also more permeable. Labour market exits *and* re-entries are much more common in liberal welfare states, where the distinction between labour market insiders and outsiders is less serious (see Hall & Soskice 2001: 40f.; Mayer, 2004: 177). This may also lead to more flexible adaptation of childbearing plans to involuntary periods outside the labour market – due, for example, to unemployment or economic inactivity. In contrast, the general absence of leave regulations may have a positive impact on female employment opportunities, since employers are less likely to expect childbearing plans to interfere with work than in welfare states where there are extensive regulations dealing with maternity leave (see Soskice 2005: 176).

---

[52] However several benefits and tax credits meanwhile (for example the Working Family Tax Credit WFTC, 1999, respectively Working Tax Credit WTC, 2003) subsidise the uptake of commercial childcare in the UK.

[53] As labour markets in the liberal welfare state also rely on the female labour force, flexible working arrangements for mothers have become common, although this area remains widely unregulated by the welfare state (see Morgan 2003: 596).

The aforementioned hypotheses may offer some hints as to why fertility in the UK and the US remains so high compared to other countries. Yet, they still require empirical testing in future research and thus remain speculative for the time being.

Family or Social Policies?

In the previous discussion on the potential fertility impacts of policy measures, I have focused on *social policies* in a general sense. A more differentiated understanding examines welfare state measures affecting fertility in relation to the specific domain of *family policies*. Indeed, the discussion of whether *family policies* or – more generally – *social polices* affect fertility rationales of social actors is more than just a terminological debate: the previous discussion of welfare regimes has already demonstrated the importance of creating and integrating a broad body of policy measures in order to achieve predefined policy goals.

Family policies are at the core of the array of social policies affecting individual family planning behaviour. Yet, successful policies do not stop there: they also incorporate measures from different life domains that relate only indirectly to family issues, but that nevertheless affect fertility plans. “Countries which regard their family policies as part of labour-market policies, of care-policies, and of gender policies, seem to have fared better in retaining fertility above lowest-low-levels.” (Neyer 2003: 69; see also Sackmann 2000: 148).

Furthermore, the various social policy measures need to be designed to fit together in such a way as to offer comprehensive, concerted support to potential parents in the realization of fertility goals (through family and other policies). Special care is required to prevent inconsistencies and contradictions – either between different policy measures, or between government policies and widely held individual goals. The perhaps most crucial negative example in this context is the discouragement of female labour market participation.

Social Policies as Institutional Context of Individual Fertility Rationales

The following discussion will focus on how exactly policies can affect individual fertility rationales. Note that this will address some of the issues of individual fertility decision making that will receive more in-depth attention in the following section, where fertility is examined as a consequence of rational planning, thus elaborating the micro-theoretical framework. The study at hand is concerned above all with analysing first-birth decisions. First-birth transitions – particularly with respect to their timing – are of key importance for the levels of completed

fertility. Social policies that operate by making parenthood more compatible with work can help to decrease the postponement of first births, thus extending the time frame available for additional births across the life course (for the impact of policies on birth timing, see Cigno & Ermisch 1989: 758 or Andersson, Hoem & Duvander 2006 for Sweden, e.g.)

The transition to first parenthood dramatically changes the life course (see Hobcraft & Kiernan 1995). Policies may intervene in this process by helping in (or hindering) the creation of viable conditions for future parents prior to family formation, or by alleviating some of the hardships that accompany parenthood. Furthermore, public policies can help relieve some of the individual life course risks that arise with childbirth (for example, by providing women with maternity protection or job-return guarantees) or minimize the financial drawbacks (for example, by providing families with cash- or tax-benefits). First-birth transitions are of key importance in this context, since most couples who have not yet had their first child are relatively uninformed about the range of public benefits available to them. Hence, future parents probably do not make their fertility plans based on a precise calculation of the family benefits available; in fact, they probably have only a very rough impression of the various measures that could help in the realization of family planning goals. Thus, their calculations of the costs and publicly provided benefits available is probably biased by limited knowledge regarding the availability, eligibility, and probable amount of monetary support.

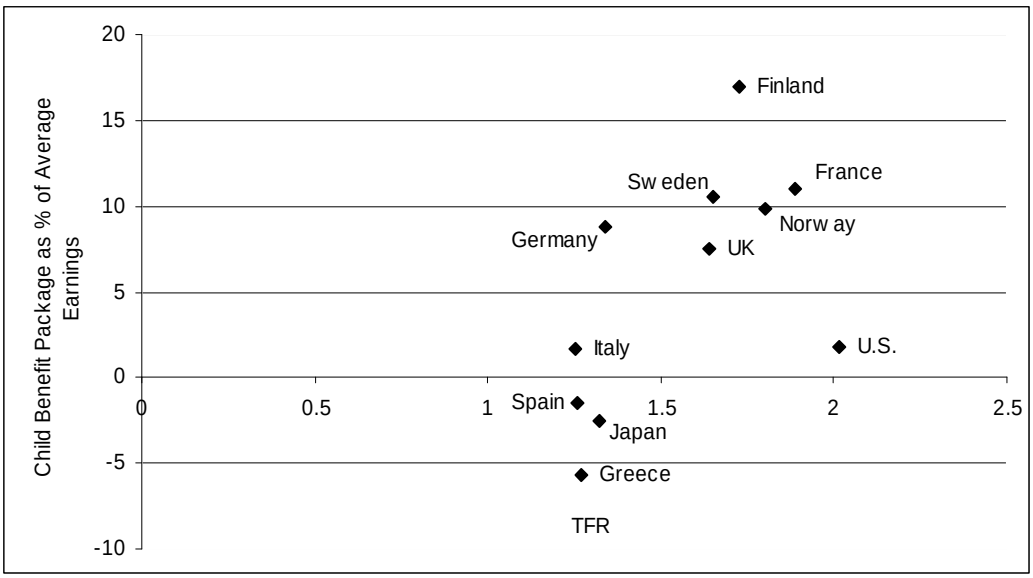
If monetary incentives or non-monetary support (such as generous leave polices or publicly available daycare) are assumed capable of affecting family planning rationales in a positive way, then not only the level of support is crucial but also a broad public awareness of the specific schemes available. Thus, even if a specific policy measure offers extremely generous support in order to encourage parenthood, it will go without the slightest effect if it is not adequately publicized. This introduces two further variables determining the effectiveness of social policies in positively affecting fertility decisions: the extent of public knowledge of specific schemes, and the extent to which a couple seeks and uses this knowledge in the decision-making process.

Discussion of the Effectiveness of Social Policies in Affecting Fertility

The effectiveness of social policies must be considered in the light of the above discussion regarding the limited knowledge and bounded rationality of human actors (see generally Simon 1955; 1959; see also Section 4.2). The capacity of social policies to affect fertility has been

the subject of a long and hotly contested debate. And in fact the issue still remains open because of the paucity of research in this field, especially from a cross-national comparative perspective (for an overview see Neyer 2003: 78; see also Björklund 2006: 4; Morgan 2003: 594ff.). The following discussion will provide an exemplary focus on the effects of *monetary benefits* on fertility[54].

Figure 9: Child Benefit Packages and Total Fertility 2001 / 2002



Source: Bradshaw 2005 for child benefit packages & Council of Europe 2006 for data on TFRs; see also Table 1.

At first glance, it seems obvious that monetary benefits and fertility are closely linked. While the Scandinavian countries, which offer generous financial support, show high levels of fertility, low-fertility countries like Italy and Spain display what Kohler and colleagues classify as "…some of the lowest levels of state support for families with children through tax allowances or direct transfers" (2002: 665). Beyond this paradigmatic examples, however, a closer look at the cross-national variation reveals less obvious relationships. Based on aggregate data on 22 countries, Gauthier and Hatzius (1997) report a fertility effect of family allowances (including child and maternity benefits as a ratio of average earnings in a country). However, the strength of the effect of cash benefits on fertility is almost negligible. Another, mainly de-

[54] Studies investigating the relation between *fertility and childcare provision* fail to identify a close link (see Hank 2002, Kreyenfeld 2002 for Germany, Andersson, Duvander & Hank 2004 for Sweden, Kravdal 1996 for Norway; see also the discussion on p. 56). Where *leave policies* are aimed at a close birth spacing, they have been found to affect mainly the timing of birth rather than the overall quantum (see for example Lalive & Zweimüller 2005 for Austria or Hoem 1993 & Andersson 1999 for the Swedish *speed premium* policy).

scriptive study offering a rather broad investigation of child-related allowances in 22 countries[55] was unable to identify a clear effect of child benefit packages on period fertility (see Bradshaw & Finch 2002; Bradshaw 2005).

Figure 10 illustrates this rather scattered picture. The only group for which Bradshaw et al. were able to identify an effect were rather poor families for whom state support in child-related costs actually seems to affect fertility positively. Yet, both studies mentioned above contain a series of methodological pitfalls, the most serious of which is certainly the reliance on aggregate data. When utilising such an approach, any direct relation between monetary support and individual fertility choices is impossible to identify (for further discussion, see Brewster & Rindfuss 2000: 283ff.)

A more focused micro-level study by Laroque and Salanié (2003) analysed the effect of the French APE (for a detailed description of the APE, see p. 73). The authors came to the conclusion that in France, monetary incentives play a substantial role in positively affecting fertility rationales. Yet, a more detailed view provides contradictory evidence: the strongest fertility effect created by the APE was on first births, while the effects on third and higher-order births were negligible. This is quite startling since the APE does not offer *any* first-birth benefits, while benefits rise to a significant level with third and higher-order births. Regarding monetary benefits for parents in Sweden, spurious evidence relates cutbacks in leave policies during the 1990s that reduced levels of income replacement to the fertility decline observed in Sweden during that period (see Andersson 1999; Hoem & Hoem 1999).

In their sum, these findings support the notion that while the economic resources and particularly the monetary incentives available to future parents are important variables in fertility planning, the exact relation between economic resources and fertility behaviour is far from clear. The implicit hypothesis tested in the studies mentioned above is that child allowances minimize the cost of having children and thus positively affect fertility. Such a fertility effect is certainly intended by at least some policy makers. Yet, the assumption of a straightforward relationship between monetary support to families and fertility can be challenged on several grounds:

---

[55] These allowances are defined to include monetary housing, health, education, and child benefits as well as benefits received through taxation, in-kind services, and childcare support.

The first reason, already mentioned above, may explain the unclear relationship: future parents can neither be assumed to know about all the available schemes, nor can they be assumed to be capable of accurately calculating the anticipated costs and benefits of parenthood (see generally Simon 1959). An additional issue is that the marginal utility of child benefits probably decreases with increasing income. Thus, monetary transfers probably matter most to the most needy, while the fertility effect of child allowances among high-income couples is probably negligible (see Aaberge et al. 2005: 141). The latter group may consider the time costs a much more important issue (see Mincer 1963: 67f.) and be affected more by the availability and normative acceptance of public vs. private childcare (see Brewster & Rindfuss 2000: 287ff.)

Furthermore, looking solely at the level of child benefits available says little about how accessible they are to parents-to-be. The terms of eligibility may be imprecise or even incomprehensible. Even if actors know about certain benefits, they may be uncertain about the eligibility requirements or how to claim the benefits. This probably restricts the extent to which people take benefits into account in their fertility planning. Moreover, claiming benefits involves transaction costs. This also might explain why cash benefits in France are so effective in contrast, there are numerous hurdles involved in determining eligibility and claiming benefits due to the multitude of regulations and institutions involved (see Spieß 2006: 57).

Another crucial issue is *how exactly* particular monetary incentives influence fertility behaviour. The example of Germany shows that generous family support may well provoke a negative effect on fertility behaviour, since the taxation of married couples – especially in combination with German leave policies – fosters a retreat of women from the labour force (see Esping-Andersen 1996; Brewster & Rindfuss 2000: 280; Dingeldey 2002; Apps & Rees 2005). Policies that promote a traditional division of labour only support those men and women whose life plans do in fact favour a breadwinner / homemaker division of labour. But for to-be-parents who reject a traditional division of labour, such incentives generally signal an incompatibility between parenthood and gainful employment. In particular, this results in the postponement of parenthood or more generally in lower overall fertility among women whose life plans include a combination of motherhood and gainful employment.

Another issue is that – although generous and/or well-designed – policies may do well at achieving distributional equity or at combating child poverty. However, most welfare states

lack a *concise goal* integrating all their different family policies or more general social policies. Yet, France combines pro-natalist policies with a pronounced horizontal redistribution to families with children (see Lewis 1992: 165ff.), and Sweden offers support aimed at encouraging egalitarianism in a dual-earner model by improving work-family reconciliation (see Hoem 2005). In Italy and Spain, however, family-related social policies serve various particular aims but lack a consistent direction (see Blossfeld 1995: 11; Chesnais 1996: 734). Such piecemeal policies are prone to producing contradictory and often unintended effects with respect to fertility[56]. The effect of a particular policy measure, capable of supporting the realization of fertility plans can end up being offset by the negative or contradictory effects of the combined array of other social policies. In fact, Germany and Austria show many similarities to the Southern Rim nations in reproducing these kinds of contradictory patterns (see Hobcraft 2004: 82). Andersson and colleagues argue with respect to daycare in Germany that better provision "…would not suffice to foster women's employment and fertility, as long as most other welfare state institutions remain directed towards the traditional male-breadwinner model". (2004: 416).

What distinguishes the different family policies across countries is more the priorities according to which funding is allocated, than the actual monetary amounts provided. This corresponds with people's limited capacity to calculate potential but generally uncertain future benefits (or other measures designed to help parents) into their childbearing plans. It seems more plausible that people base their fertility plans on more generalized perceptions – for instance, the idea that combining parenthood and career is easy or difficult. Social policies fundamentally shape the compatibility of different life domains through numerous schemes including leave policies, childcare provision, and labour market policies. Monetary support is just one tool among many. However, it seems plausible that beyond a basic level, monetary support functions in fostering the perception of security by insuring families against basic risks more than in merely expanding their purchasing power, particularly in the case of families that are already fairly well off. "It is doubtful that it is possible to simply pay people to have children by offering various allowances or tax deductions. In the Swedish context, child-

[56] One example is fostering female investments in human capital while simultaneously fostering a retreat of women from the labour force through family policy incentives, thus depreciating their human capital investments.

birth is supported by providing an infrastructure that allows women and men to pursue their individual life goals in terms of family or professional life." (Andersson 2005: 11).

Advocacy for Analysing Fertility from a Joint Perspective of Gender and Labour Markets

The preceding review and analysis of policy regimes suggests that the view that the welfare state can affect fertility rationales solely by means of specific family policies is too narrow. A crucial further aspect is how the welfare state shapes access to the labour market, particularly for women: "Public policies that will lead to decreases in time spent out of work, which is the most important part of the period shadow price of giving birth, will have an effect of decreasing age at maternity." (Gustafsson 2001: 244). Successful policies in this context assume that today the wide majority of both men *and* women aim to participate in gainful employment. Such goals are embedded in the foundations of modern societies: they arise from the ideals of individual autonomy and emancipation from (economic) dependence and attain even greater urgency due to labour market insecurities, which are best confronted by dual-earner couples for protection against economic risks. They are fostered further by growing incentives to participate in (higher) education and to invest in human capital – particularly for women. Many of the contexts outlined so far suggest that a common trait of many low-fertility regimes is the cultivation of incompatibilities between labour market participation of women and the transition to parenthood by unilaterally fostering the role of the female homemaker, ignoring female life course goals, and creating contradictions in the incentive structure.

3.6 Conclusion

Revisiting the Cross National Background – Suggestions for a Frame of Reference

The preceding sections have sketched out the background of declining fertility levels over the last decades. It has been shown that the interactions between cultural differences and the institutional framework profoundly influence fertility behaviour by affecting the normative framework of parenthood and gender roles, and – last but not least – in defining the relationship between domestic and paid work. Although the specific impacts of policies remains blurry, empirical evidence suggests that such institutional arrangements play a decisive role in

mediating work-lifestyle fertility choices (see especially Kangas & Rostgaard 2007). This notion is supported by the finding of striking regularities in persistently low fertility across those countries that institutionally favour traditional families with a male breadwinner / female caregiver model (see Andersson 2005: 12).

It has been a key aim of the preceding sections to elaborate and highlight the fundament of a cross-national perspective on fertility behaviour. In this concluding Section of Chapter 3, I briefly summarize the main issues, which will form the foundation for the empirical investigations that follow.

a) The **orientation of the welfare state** will serve as a **general frame of reference** in which I will consider differences in labour market coordination, in the tradition of Hall & Soskice, both under prevailing gender inequality, as stressed by Sainsbury, Lewis, and Ostner, as well as in life course outcomes, as highlighted by Mayer and DiPrete.

b) Nevertheless, **linking fertility to particular policies** still appears to be a difficult task.

> "Family benefits, maternal or parental leave policies, and childcare availability […] are not particularly good predictors of national fertility levels. […] This is likely, at least in part, a measurement problem, yet, it points to the need for a more comprehensive conceptualization of the structural and institutional aspects of role incompatibility." (Brewster & Rindfuss 2000: 291).

This is a crucial issue for determining whether particular polices should be considered in a given theoretical and empirical framework. However, the evidence outlined so far suggests that parents-to-be are probably unaware of all the particular schemes and parental support available to them[57]. Instead, the actors probably have just a general impression of the difficulties they will face in reconciling their previous life with the transition to parenthood. In this context, welfare state alignments can be supportive in providing a general environment fostering compatibility between parenthood and other life domains, especially employment.

In fact, those welfare states that have deliberately designed their policy frameworks around **concise aims** that include minimizing the life course incompatibilities associated

[57] This applies especially to first-birth transitions, which imply the most pronounced life-course change among all birth orders, and particularly given that to-be-parents have limited knowledge on kinds of parental benefits.

with parenthood and especially motherhood show the highest levels of fertility (see Neyer 2003: 50; Mayer 2005: 45). In contrast, countries that tend to aggravate role incompatibilities by supporting outdated family models show considerably declining fertility. A crucial aspect to be examined in the following empirical analyses is the exact nature of the institutional contradictions that affect childbearing plans. Hence, a cross-national perspective requires that one distinguishes among broader welfare state orientations, whereas a more narrow comparison of particular policies is likely to produce a skewed picture, incapable of fully unravelling the general mechanisms driving fertility behaviour.

c) A crucial issue affecting fertility is the **orientation of the welfare state system towards gender equality**, that is, whether it encourages or implicitly discourages equality in gender relations. Thus, I will consider the role of the welfare state with respect to the broader environment it creates for parenting rather than with respect to a particular scheme (see also Morgan 2003: 595ff.)

d) Men and women still face different normatively prescribed roles and tasks that become even more traditional with the transition to parenthood. **Gender still forms a key aspect of differentiation.** Thus, cross-national differences in fertility behaviour will be examined here through the lens of gender, by studying the ways that men and women are defined and treated differently in culturally anchored norms on gender roles and concomitantly in welfare state institutions.

e) Aggregate completed fertility is essentially a derivative of the **timing of first-birth transition in the life course** (by determining the time span left to have additional children). Family formation and labour market entry commonly coincides in a segment of the life course that is extremely sensitive to the adoption of irreversible paths (see Hobcraft & Kiernan 1995). For the timing of first birth, labour market participation is perhaps the most important competitor with family formation in modern societies. Countries that favour a traditional division of labour tend to organise life courses around the nuclear family (see Mayer 2005: 43), thus perceiving women primarily as caregivers. In doing so, they provide an incentive structure that encourages a female retreat from the labour force. Accordingly, work-family incompatibilities in such countries tend to be severe.

f) Hence, **a labour market perspective is crucial** for a thorough understanding of the interrelation between paid work and the behavioural mechanisms that govern fertility choices. Labour market coordination is a key element of welfare state intervention, mediating occupational risks, trust and commitment in occupational relations, as well as labour market exclusion, where the divide between labour market insiders and outsiders is extensive (see Hall & Soskice 2001; 2003. As higher **trust and reliability in labour market relations** affects the ability to make long-term commitments in the private domain, the type of market coordination also has an impact on family formation behaviour.

g) **Life course risks** like economic dependence or long-term unemployment pose a threat to the future stability of families (see generally Mayer 2004). Importantly, to analyse the impact on fertility behaviour, it is crucial to consider the way in which risks are contained by welfare state intervention rather than limiting the analysis to the level of welfare support in case of economic dependence. Whereas a high level of monetary support in case of unemployment is common in coordinated markets, liberal markets inherit lower risks of becoming long-term unemployed by higher permeability of labour markets, for example (see DiPrete 2002; Hall & Soskice 2001).

h) Country-specific fertility behaviour needs to be examined in the context of the particular **cultural background** and especially with respect to the extent of secularization. This background shapes people's values and perceptions about parenthood, but also the policy setup and people's expectations about those policies. Expectations about policies in turn determine, which types of policies are widely accepted and which are rejected. This is also reflected in the policy making process – either implicitly (through cultural norms also considered by the policy makers) or explicitly (through the reactions policy-makers anticipate from voters). All in all, social policies seem to do better in promoting fertility where they follow consistent and precise goals, and where they are attuned to the broader socio-cultural framework in order to avoid creating contradictory incentives.

i) The relationship between the welfare state system and fertility cannot be analysed without **consideration of the specific societal background**, that is, without taking into account cultural historical origins as well as particularities of a society's institutions and social structure (see McDonald 2002: 417). This imposes clear limits on concepts of cross-national investigation that simply compare singular measures in their scope and ef-

fect. “A specific policy cannot be seen in isolation, and its effect in another context might turn out to be completely different from where it was introduced.” (Andersson 2005: 8f.) The conclusion I have drawn from this for the theoretical and empirical analysis is that a simple integration of aggregate institutional measures of, for instance, particular benefits provided in particular countries is insufficient to gain a deeper understanding of fertility behaviour. In the following cross-national comparison, I will thus consider, both conceptually and theoretically, how individual behaviour develops in its specific national contexts (see also Mayer 2005: 36f.) Furthermore, in the interpretation of the empirical results, I will seriously ponder these national contexts and the specific array of institutions. “In fact, it will usually be inappropriate to attempt to evaluate the effect of particular individual policies because the effectiveness of any policy will depend upon the broader setting.” (McDonald 2002: 442).

j) The mechanisms affecting fertility behaviour rarely operate in a monocausal way. Of vital importance is the understanding that **the triad of individual behaviour, cultural background, and welfare state orientation develops interdependencies** over time that affect fertility choices. This context, as outlined in this Chapter (3), will form one of the main pillars of the empirical analysis, whereas the key focus will lie on the differentiation among welfare state alignments.

In summary, it can be stated that work-family conflicts are less severe where the institutional makeup is focussed on supporting people to achieve the most common life goals that the majority of individuals in modern societies shares. In contrast, work-family conflicts are most severe where welfare policies focus on preserving cultural and especially religious traditions within the incentive structure of the array of welfare policies.

These distinctions and considerations will frame the cross-national comparison of low fertility behaviour in the following.

Implications for a Multi-Level Framework Anchored at the Micro-Level

The findings outlined above have stressed that when conducted solely at the aggregate level, analyses linking low fertility to societal contexts are of limited explanatory power and produce spurious results. In such studies, the contextual factors associated with low fertility commonly fail to provide a causal understanding of the underlying mechanisms. Examples in-

clude the unconvincing attempts to link overall fertility to out-of-wedlock births, to marital instability, and most importantly, to trends in female labour market participation. The spurious findings from studies linking contextual factors and fertility dynamics on the aggregate level provide strong arguments for a more detailed micro-level analysis. This is not to say that macro-level analysis cannot successfully identify general patterns such as a general fertility decline or a rising mean age at first birth (as presented in Chapter 2). Importantly, however, macro-level investigations fail by design as they are incapable of providing a thorough understanding of the underlying mechanisms, and thus leave the door wide open for misinterpretations (see Boudon 1986; Huinink 2001b). I argue that a micro-perspective of individual behaviour is an indispensable component of any theoretical and empirical approach, dedicated to unravelling and understanding fertility patterns. First births are of special value in this endeavour, as they constitute perhaps the most consequential life course transition that entails fundamental life course changes. Therefore, a process of intense personal deliberation usually precedes this step.

These considerations echo the findings outlined above, and further highlight the need for a more actor-centred perspective: after all, the individual is the key addressee of welfare state systems in general and of social policies in particular. This notion inevitably shifts the perspective to the idea that fertility reflects essentially individual behaviour, shaped by individual plans, choices, and decisions at the micro-level, under the impact of the social, cultural, and institutional background at the meso- and macro-level of society.

Crucial to the analysis of fertility behaviour is the consideration of gender as a central dimension of inequality that emerges in confrontation with the structural, institutional, and cultural context. Importantly, the labour market as a societal system takes a central position in mediating both gender- and life-phase-specific inequalities (which are commonly aggravated by childbearing decisions). This brings the argument back to the initial statement by Brewster and Rindfuss regarding the requirements of a framework for the analysis of fertility: "…it must be dynamic; it must recognize the multi-dimensionality of both labour force participation and fertility; and it must be multilevel, incorporating the institutional and normative arrangements that influence individual fertility and labor force behavior." (2000: 291). A cross-national perspective is a proper tool for differentiating the impact of specific national patterns that appear in the institutional and cultural-normative background.

When using a multi-level framework, one must proceed more slowly and cautiously than when analyzing joint effects across countries in aggregate data, because here one has to consider the institutional and socio-structural background as well as the individual perceptions of and reactions to it. One has to consider not only the numerous structural and institutional factors that shape individual life courses and fertility behaviour but also the individual decisions that in their sum affect the macro-level framework through dynamic interplay (see Huinink 2000: 348; see generally Coleman 1990: 11). Hence, the following chapter (4) will carefully extend the cross-national framework outlined above to encompass a micro-theoretical framework of individual behaviour, with the aim of analysing first-birth decisions from both a cross-cultural and an intertemporal perspective. The implications of this framework will be investigated in two empirical case studies of fertility choices over time (Chapters 5 & 6), based on an in-depth consideration of life trajectories in the context of labour market behaviour, which is the main competing domain to family life and parenthood in industrialized countries.

Chapter Four

The Transition to Parenthood as Rational Choice – A Micro-Theoretical Framework

"Either explicitly or implicitly, almost all explanations of human fertility have some decision-making ideas at their heart."

Harvey Leibenstein (1981: 381).

Taking its starting point from Leibenstein's cited assumption, the aim of this chapter (4) is to outline a theoretical framework that conceptualises the first-birth decision as consequence of a rational choice. This choice is not made solely in a situational context, but emerges over time in a context of biographical planning. Why do some individuals choose to start a family early in their lives, while others delay the transition to parenthood until their late thirties, or ultimately remain childless? Moreover, why do some people choose to have a child in apparently adverse contexts, while others decide against starting a family even under the most promising conditions? The goal of this chapter is to develop a series of theoretical perspectives that can provide the necessary tools for addressing these questions analytically.

To this end, this chapter begins with an excursus discussing whether the theoretical claim that transitions to parenthood are an outcome of decision-making processes is indeed empirically justified. In this context, Section 4.1 reviews the ratio of planned, unplanned, and unwanted births in different countries. Although it would be impossible to establish a definitive underlying structure of rational planning directly from these findings, this empirical perspective offers a preliminary impression of whether the majority of births are the product of deliberate reflection or are simply the result of chance.

The stepwise introduction and application alongside theoretical models of rational action in Chapter 4 will rely on a modelling of rational action that is closely oriented on what Siegwart Lindenberg describes as *the method of decreasing abstraction"* (1992; 2003). He suggests to start out with a simple and highly deductible rational choice core and to proceed by stepwise increasing the complexity of the theoretical framework. Correspondingly, Section 4.2 initiates the development of a theoretical model that describes the transition to parenthood as a rational decision, by addressing the fundamental assumptions behind ideas of rationality and rational action. This discussion investigates the issues surrounding the distinction between means-end oriented instrumental and value-based rationality, concluding with a focus on the limited capabilities and informational setup of human actors in the boundedness of rationality.

Section 4.3 turns to the ponderings and evaluation involved in the decision to start a family. It provides an analytical view of the costs and benefits associated with childbearing and looks at the role of preferences and competing alternatives. In particular, the choice to become a parent is discussed with a focus on the role of immanent values associated with having children. Section 4.3 concludes by outlining a theoretical framework in which immanent value-based plans to start a family are identified as intermediate goals in the satisfaction of higher-order needs of physical well being and social approval. This social production function approach provides a link to a basic model of rational action, as suggested by Lindenberg (RREEMM; 1985, 1990a). While these findings are supplemented by the more psychologically oriented theory of planned behaviour (see Ajzen 1991), the RREEMM model provides the basic theoretical foundation for continued elaboration in subsequent chapters.

Progressing from these base assumptions, Section 4.4 introduces the key issue that it is usually two partners, who discuss their childbearing plans. In this context the paradigm of the New Home Economics, which implicitly assumes conjoint decision-making in order to maximise household utility, will be juxtaposed to more refined models of social exchange and bargaining, which posit two actors negotiating their respective childbearing preferences and associated domestic tasks. The latter approach results in a particularly rich view of the interaction, dynamics, and differences of power in a partnered relationship, thus offering a more detailed view of these particular decision-making processes.

The observation that bargaining among couples is a stepwise and iterative process makes it possible to view the emergence of dynamic decision-making as sequences of (re-)negotiation

and choosing. This dynamic perspective on decision-making will be further elaborated in Section 4.5 This section scrutinizes the way that decisions relating to fertility goals emerge over time and will focus on the role of myopic behaviour, utility discounting in long-term goal attainment and on choice under uncertain future conditions and risks. Given that family formation always constitutes a step into a more or less unknown future, and understanding that the path toward parenthood is usually the outcome of a multitude of interconnected decisions, it is essential to include such concepts of intertemporal choice. Finally, Section 4.5 will address the impact of framing and habitualisation on the development of long-term goals, and will outline key issues that apply in sequential choices that characterize goal-oriented behaviour in the realization of childbearing plans.

This dynamic perspective will be expanded to include a life course view in Section 4.6. The life course view allows for a dynamic and thus more meaningful recognition of the motives that underlie individual fertility. The life course perspective signals an approach that adheres to the dynamic nature of a goal-oriented theory of action, focusing on the interaction between actor and society (see Coleman 1990). The dynamic emergence of family formation plans will be defined as subject to individual development, biographical planning, and the progression along status passages, such as leaving the parental home, finishing education, and starting a job. In addition, the biographical attainment of fertility goals is discussed with respect to social contexts, particularly partnerships, and the impact of institutions. The concept of linked lives, i.e., the notion that partnered life courses – particularly with respect to fertility behaviour – are intertwined and thus affect each other, expands the issue of dynamic interaction, outlined in Section 4.4 to a life course view. The following section (4.6.4) will address the key issue that fertility transitions and both preceding and subsequent life trajectories as well as the status as a parent are fundamentally shaped by society and its institutions (see Mayer 1991; 2001). With this discussion, the micro-theoretical framework will conclude by referring back to impact of the structural and institutional macro-level on individual fertility behaviour.

4.1 Ratio or Casus? – The Transition to Parenthood as a Rational Decision

> *"The question of rationality in this area is related also to a somewhat larger question – whether or not fertility as such is a decision variable. A reasonable view is that sometimes fertility is a decision variable and sometimes it is not."*
>
> Harvey Leibenstein (1979: 287)

Most of the seminal theoretical contributions to the investigation of fertility behaviour in modern societies are founded on the notion that actors have command over fertility and plan their transition to parenthood accordingly (see, e.g., Becker 1993; Hobcraft & Kiernan 1995; Thomson & Hoem 1998; Barber 2001; Huinink 2001b). Hence, childbirth is generally understood as the result of a rational decision; it is a choice under alternatives. Indeed, the decision assumption is perhaps the most fundamental component of any causal explanation of intentional fertility behaviour (see Ajzen & Fishbein 1980: 130ff.). While there is a vast body of research that – explicitly or implicitly – resorts to this assumption, there is surprisingly little evidence cited in support of the fundamental hypothesis that fertility is an intentional behaviour.

Thus, before I proceed with the task of elaborating a theoretical framework of biographically planned family formation, I will first investigate whether my arguments are backed by empirical evidence to indicate that a significant proportion of births are the result of parental planning and choice. This way of proceeding is crucial, for any theoretical and empirical elaboration founded on the decision assumption will remain fruitless if it is not corroborated by convincing evidence of the validity of the choice assumption.

Indeed, there are justified doubts that fertility transitions are consequence of rational choices per se. With reference to teenage pregnancies for example, Kiser notes that "…it seems doubtful that many of the premarital pregnancies are preceded by rational choice and decision-making." (1979: 284). While the issued concerns are limited to births that occur well ahead of the average age at first birth, commonly violating corresponding age norms, the validity of the choice assumption has also been challenged on grounds of deficiency of the theoretical underpinning of fertility choices (see, e.g., Burkart 1995 or Kühn 2001). Particularly

Burkart (1995) stresses that a static concept of choice under alternatives is too narrow a framework for characterising the complex planning that initiates biographical transitions. The present study is in accord with this criticism precisely on this point. However, this contribution does not reject the theoretical toolbox of rational choice entirely, but rather extends these concepts to elaborate a perspective on biographical planning as a process following a life course related rationale.

In fact, the figures on intended childbearing that will be presented provide distinct support for the argument that the majority of fertility transitions are indeed the consequence of choice processes. Nevertheless, care should be taken not to interpret these figures naively. A number of methodological pitfalls mitigate the presented evidence. Among the most central ranks the fact that the planning status of childbearing has been collected postpartum. In a certain number of cases, it is likely that the development of the parent-child relationship has led to a retrospective attribution of the birth as an event desired by the parents, although that parenthood may have been originally unintended.

In the following paragraphs, I will distinguish conceptually between *intended* and *unintended* (4.2.1), as well as between *wanted* and *unwanted* fertility (4.2.2). With respect to underlying choices, I assume that *intended* fertility is always preceded by some kind of rational considerations, based on a more or less extensive planning horizon. In contrast, *unplanned* childbearing initiates a self-confrontation with a potential future parenthood. That is, such a choice is *necessarily* rather ad-hoc. Even in cases where the desire to have a child at some point has already been considered in biographical planning, an enforced choice of this kind most likely derails other life plans with respect to the timing and ordering of crucial life transitions. In the latter case, the transition to parenthood (given that the parents-to-be opt in *favour* of having the child) can also be designated as *mistimed.*

Nevertheless, although biographical plans may be broken through an unplanned pregnancy, the choice of whether to have a child under the given conditions may still be based on rational deliberations. From this point of view, the only situations bereft of *any* element of rational decision-making are contexts where childbearing and subsequent birth are both unintended and unwanted, but where the pregnancy cannot be interrupted due to medical, ethical, or other inhibiting reasons.

4.1.1 Intended and Unintended Childbearing

To illustrate the roles that either reason or chance might play in determining fertility outcomes, it may be helpful to create a sketch of the possible pathways to family formation. A commonly used distinction in research literature draws a dividing line between either *intended* or *unintended* childbearing (see Barber, Axinn & Thornton 1999: 233). The former case almost always originates in some kind of rational decision: A couple decides to have a child in the near future and thus discontinues the use of contraceptives, for example. In the latter case of *unintended* childbearing, a couple is unexpectedly confronted with a pregnancy and has to make the decision whether or not to carry out the pregnancy. The choice nodes can result in either a) childbirth, in which case the childbirth is initially *unintended* but eventually *wanted*; or b) in the rejection of parenthood, in which case the couple usually seeks medical assistance to terminate the pregnancy. The choice, however, is constrained by the more or less narrow time frame during which the option of abortion remains available, and by the consideration of medical and ethical factors. In some cases, these constraints predetermine the outcome of a pregnancy completely, thus removing the element of choice from the actors. This applies, for example, if the month of pregnancy or strict religious beliefs prohibit an interruption. In these cases, childbearing and consecutive childbirth can be referred to as being *unwanted* (see Barber et al. 1999 or D'Angelo, Gilbert, Rochat, Santelli & Herold 2004).

4.1.2 Wanted, Unwanted, and Mistimed Fertility

Another variety of unintended pregnancy appears in the case of *mistimed* childbearing. This is of special relevance for our topic, since it relates to the role of biographical planning and the intended timing of parenthood. Childbearing is perceived as being mistimed if a pregnancy occurs when a couple has plans to have a child at some point in the future, but has not laid out a timing schedule, or if the pregnancy occurs ahead of the planned time. In such a case, parenthood is generally welcome, but it collides with biographical plans. In this case, a rational decision would be based on weighing the option of having a child now against the extent to which biographical plans become disorganised. Yet again, if values, beliefs, or medical factors preclude the option of having an abortion in a case where the couple would *ceteris pari-*

bus prefer not to have that child, the mistiming can result in an *unwanted* childbirth, by ruling out a rational choice under alternatives.

4.1.3 Prevalence of Planned Fertility

The conceptualisations outlined above illustrate that there are only a few paths to family formation bereft of *any* element of rational decision-making (captured by the term *unwanted* childbearing and childbirth). This section provides empirical evidence to support the view that the majority of births are most likely the result of decision-making.

In an analysis of the National Survey of Family Growth (NSFG) conducted in the US, Henshaw (1998) points out that more than 50% of all pregnancies in 1994 were planned, while from the remaining half, 23% resulted in unintended births, and approximately 27% ended in an abortion. Taking into account only the birth events (i.e., discounting terminated pregnancies), about 30% of all births were originally unintended. This 30% can be broken down into roughly 20% that were the result of mistimed childbearing and 10%, which were unwanted pregnancies. The rate of unwanted births was highest among teenage mothers and markedly lower among older women. These results underscore the prevailing view that in the US (as in other liberal welfare states; see, e.g., Ermisch & Pevalin 2003; see also Section 3.5) a high rate of unwanted pregnancies is more dominant among young adults, resulting in high rates of teenage motherhood. Based on the National Maternal and Infant Health Survey (NMIHS), Kost and Forrest (1995) report slightly higher figures of mistimed childbearing (36%) and a somewhat lower proportion of unwanted births (7%) for 1988. They conclude that unwanted childbearing is positively related to lower levels of educational attainment and a higher incidence of poverty.

In an analysis of a non-representative sample of women from 15 US states, D'Angelo and co-authors (2004) report figures similar to Kost and Forrest. According to their results, 57% of all births in 1998 were the result of intended childbearing and thus an outcome of deliberate planning. Among the remaining 43% of unintended births, 32% of the pregnancies were mistimed while another 11% were unwanted. The distribution of behavioural prenatal risk factors like smoking or drinking was highest in the group that reported their childbearing to be unwanted (see D'Angelo et al. 2004: 194ff.).

Focusing on unwanted childbearing in twenty developing countries, Bongaarts (1997: 267f.) comes to the conclusion that roughly one-fourth of all births in these countries (excluding China) are unwanted. Taking into account the fact that control over reproduction is less elaborate in the developing world, the higher proportion of unwanted births as compared to the U.S. does not come as a surprise. However, data for Western European countries, based on the Family and Fertility Survey (FFS), reveal a similar proportion of unwanted births: in Spain, 28% of the pregnancies were unwanted (1994-1995); the proportion of unwanted pregnancies in Italy stood at 21% (1995-1996); in France (1994), it was as low as 8% (Klijzing 2000: 76).[58] In a German study, covering a sample of about 1900 women, Helfferich (2000: 24ff.) reports that approximately 61% of all births were intended. In another 17% of the pregnancies resulting in childbirth, the mothers reported a mistiming of the childbearing. Unwanted pregnancy was reported in only 14% of the cases. Interestingly, the study of Helfferich also underlines that in approximately 5% of the cases, the parents were not able to characterize the planning status as either wanted or unwanted. This underscores a blind spot of most of the other studies, which also has implications for the rational decision-making assumption. That is, obviously there is a certain number of cases in which the parents seem generally undecided about whether to have the child or not. They yield to the course of events rather than make a decision.

4.1.4 Conclusion – Fertility as a Rational Choice?

In conclusion, empirical evidence supports the notion that a significant number of births are indeed the consequence of choice processes. Considering cross- as well as intra-national variations in the referred studies conservatively, more than half of all births seem to be outcome of a deliberate decision to have a child (i.e., wanted pregnancies), while the combined number of unwanted and mistimed births range from one-third to two-fifths. While these figures are impressive, a word of caution is warranted. Any interpretation of these findings as evidence of a prevailing rationality in fertility decision-making is limited by a series of methodological pitfalls.

---

[58] Figures calculated from the percentage of women being pregnant at the time of the survey who reported their

The first limitation to be considered is that most studies apply only to the US, and even within the US, the various empirical studies do not aim at comparability. On the other hand, it needs to be taken into account that the proportion of planned, unplanned, and mistimed births, reported across the various surveys and even across national and cultural borders, has produced roughly similar findings. Yet, an additional weakness is that none of the surveys took into account that mistimed childbearing can result in either a wanted parenthood (if actors ponder their situation and decide to have that child), or an unwanted birth (if actors would rather opt not to have a child under given conditions, but ethical, medical, or legal constraints preclude their ability to choose). This results in an underestimation of the number of unwanted births (i.e., unwanted in a sense of stripping the actors of the benefits of choice). Nevertheless, even taking into account that a considerable fraction of the number of mistimed pregnancies might possibly be unwanted, the vast majority of childbirths can still be designated as wanted.

Perhaps the most severe shortcoming of the studies cited above is the fact that the data was collected anywhere from several months to several years postpartum. This is problematic since, firstly, "retrospective questions about childbearing intentions are inherently contaminated by recall biases…" (Schoen, Kim, Nathanson, Fields & Astone 1997: 339). Secondly, and more importantly, the mother-child relationship at this point has most likely undergone a cognitive and emotional adjustment regarding the initial wantedness of the pregnancy (see Joyce, Kaestner & Korenman 2000). This may generally lead to an underreporting of the unwantedness of the child. Finally, it should be stressed that it is primarily mothers who report the prior planning context of their fertility transition. This disregards the fact that fertility choices in most cases are the outcome of a couple's planning and negotiation. The father's (possibly dissenting) view is blocked out, as are the nuances of male-female disagreements in making fertility plans preceding childbearing (see Thomson 1997).

Nevertheless, the high proportion of planned births remains an impressive indicator, despite these methodological limitations. The presented empirical evidence suggests that the majority of births are the consequence of active choices and planning. This is also corroborated by declining birth rates and an ongoing delay in family formation in Western societies, which

---

childbearing to be either intended or unwanted.

reflects an increasing control over fertility. This point is further underscored by findings, which suggest that the proportion of unplanned pregnancies over the last decades has significantly decreased (see Westoff 1987: 165; Friedman, Hechter & Kanazawa 1994: 376). Another argument that corroborates the decision assumption is presented by empirical evidence of a fertility decision threshold, according to which the status quo of contraception use exerts a certain inertia, which cannot easily be abandoned and hence requires a deliberate decision (see Davidson & Beach 1981, Beach, Hope, Townes & Campbell 1982; for general empirical backing of the decision assumption see also Schaeper and Kühn, 2000: 142 on Germany).

The studies outlined here provide important evidence that a large proportion of parents-to-be has clearly given serious thought to their plans for having a child. Yet, there is a vast distance between responses to categorised items on a questionnaire and a thorough understanding of choice processes surrounding fertility. Thus, in the following sections of Chapter 4, I will substantiate the variance in the paths towards parenthood, the relevant constraints, and the interrelation of the actors involved in order to develop a theoretical model that addresses fertility as consequence of rational choice and planning.

4.2 Concepts of Rationality and Rational Choice

> *"RATIONAL, adj. Devoid of all delusions save those of observation, experience and reflection."*
>
> Ambrose Bierce, *The Devil's Dictionary*

> *"[…] Most economists are happy to admit they know many people whose reasoning is quite flawed: their spouses, children students, colleagues, deans, college presidents, and so on."*
>
> Richard H. Thaler (2000: 136)

As indicated in the conclusion of the preceding section, most births are evidently the result of a distinct decision-making process. But does that place them within the scope of the theoretical framework of rational choice? What makes this decision a *rational* decision? The following paragraph is devoted to reflections on the rationality of fertility decisions, and to outlining the essential features of a framework of meaning and purposeful action.

Without dwelling on the decision theoretical microfoundations of rational choice theory, its fundaments can clearly be traced back to psychological origins (see, e.g., Bandura 1986). All rational choice theories rely – implicitly or explicitly – on the assumption of a decision theoretical core that is based on purposeful action and an underlying cognitive framework. Diekmann & Voss outline rationality as action in accordance with axioms of a decision theory (2004: 13). These axioms as well as the derived concepts of rationality depend on the predominant models of man that are mobilized within various disciplines.[59] They differ epistemologically across disciplines of economics, sociology, politics or psychology, to name only the principal agents. Moreover, models of rationality also differ within disciplines, depending on the researcher's perspective on action and social reality.

Yet, a number of conceptualisations of rationality have a particular relevance for understanding consequential and complex choices, like the one to start a family. These include *instrumental rationality* as perhaps the most basic form of means-end oriented action (4.3.1), *value rationality* as a guideline for human action that is oriented on values and beliefs (4.3.2), and the subjective perspective of choice (4.3.3). Finally, the perspective of *bounded rationality* aims to overcome misconceptions in the rational choice framework by taking into account the limited capabilities of human actors (4.3.4), and by providing a more process-oriented view of rationality (4.3.5). The latter concept also prepares the ground for the discussion of choice processes emerging over time in the context of parallel and conflicting choice paths (see also Sections 4.6 & 4.7).

4.2.1 Instrumental Rationality

Instrumental or *substantive rationality* refers to means-end-oriented action that is considered one of the primary categories of human action. Instrumental rationality is a cornerstone of the neo-classical paradigm, denoting the concept of an equation with a single best solution: perfectly informed actors allocate limited resources under constraints and restrictions with the goal of maximising utility. This narrow concept of instrumental rationality, however, has provoked a great deal of criticism (see, e.g., Boudon 1998) because it devalues the explanatory

59 Accordingly, multitudes of differing rational choice approaches exist. Consequently Hechter and Kanazawa

power of rational choice through a deterministic understanding of (social) action. The notion of man, equipped with perfect information about situational contexts and the ability to consider every alternative path of action implies that actors always have knowledge about a single best solution and opt accordingly. This perspective is essentially deterministic, because its premises ultimately strip the individual of the benefit of choice. Rather than freely choosing, actors follow preferences which are – by the postulate of time consistency and transitivity – treated as being unchangeable and hierarchically ordered (see Stigler & Becker 1977). This provides a methodological framework that is theoretically applicable and mathematically manageable, but which largely reduces human action to mere information processing.

Despite these shortcomings, numerous seminal applications in the field of fertility behaviour have relied on a formulised neoclassical perspective. The contributions of Mincer, Leibenstein, Easterlin and Becker certainly mark milestones in the investigation of fertility behaviour. The affinity of these studies to logical formulations in the neoclassical perspective accounts for much of their analytical elegance. However, this is gained at expense of their ability to explain social reality in general and human behaviour in particular, beyond the conceptual borders of a highly formulaic and simplified framework. Siegwart Lindenberg's work (1985, 1990b, 1992), in particular, offers a refined view, confronting the utilitarian roots of homo-oeconomicus with Dahrendorfs *homo sociologicus*, a concept of *norm driven* man, acting in a social context (Dahrendorf 1977). This implicates a central reformulation of what factors govern means-end driven rationality, by considering the impact of "norms, rules and social perceptions" (Sen 1989: 66).

4.2.2 Value Rationality

Concluding the above, instrumental rationality offers a fundamental but still partial view of social reality. Boudon (1998: 818) notes that value-based decisions reside beyond the narrow scope of the traditional schema of means-end action, which is governed by material considerations. Emotional involvement and individual values play an important role in childbearing decisions. In this context, De Brujin (1999: 28) stresses the "…fundamental difference between

(1997: 194) perceive *rational choice* as a family of theories, rather than as a unified framework.

a choice for consumer durables and one for vital substance or life fulfilment (such as having children)…." A theoretical structure for recognizing the role of immanent values as guidelines for human action was already advanced by Weber, who clearly distinguished between instrumental rationality ("Zweckrationalität")[60] and value rationality[61] ("Wertrationalität"). Value rationality denotes action, which is based on fundamental and binding principles that serve as guidelines to action for their own sake ("…unbedingten Eigenwert eines bestimmten Sichverhaltens…", Weber 1972: 12). Whereas Weber's concept of instrumental rationality is closely linked to the notion of *homo oeconomicus*, value rationality is expressive in governing action that follows the guidelines of ultimate meaning (see Parsons 1965: 970).[62]

Particularly with respect to childbearing decisions, value rationality offers an important theoretical conceptualization of specific choices. As mentioned above, a significant number of couples are confronted with pregnancy unexpectedly (i.e., *planned* but *mistimed* fertility). Let us assume two couples, A and B, as examples of this type of situation. Couple A is confronted with an unexpected pregnancy. The partners may thoroughly balance the current contextual factors, the degree of the mistiming and their chance of fulfilling their wish for a child in the future. Depending on those factors, they eventually come to a decision to either have the child or not (assuming that there are no medical indications that inhibit that decision branch). Couple B is also confronted with an unexpected pregnancy. The partners decide in favour of having that child because inducing an abortion contradicts their religious and ethical beliefs. Importantly, couple B does not weigh contextual factors against individual preferences, because the value of giving birth to the conceived child prevents any instrumental choice. That is, value rationality dominates means-end driven choices by imprinting a categorical imperative in a Kantian sense (see Sen 1989: 65; 1997: 748f.). The set of options to choose from are restricted by a moral conduct of "self-imposed restraints" (ibid. 1994: 387).

---

[60] Weber altogether distinguishes four fundamental types of action of which he describes the two types, mentioned above as being rational. In contrast, *traditional* and *affectual* action are considered to be non-rational.

[61] Boudon, with direct reference to Weber, uses the term "axiological rationality" (1998: 825).

[62] For an extensive integration of the concept of value rationality into an action theoretical framework, see Kroneberg (2007).

4.2.3 Subjectivity – the Actor's Perspective

Any conceptualisation of rational decision-making denotes an endeavour, which is initially flawed by imperfection as it grants only limited access to the subjective nature of human decisions. In principle, this black box problem removes individual rationality from the researchers grasp.[63] Refinements to rational choice theory try to solve this problem by extending the decision theoretical core with a belt of assumptions that pay tribute to this problem of the subjective aspects of human nature. Utility to be maximised is not represented by objectively given payoffs, but is replaced instead by a subjective expectation of utility (SEU-theorem). The actors may have different likings, skills and backgrounds. Differences in resources and constraints enter the theoretical framework, as well as variations in individual preferences. Subjective choice is organized by the *individual assessment* of the situation and its objectively given constraints and resources (for an overview see Reinecke 1994, 252f., 258f.; see also Section. 4.5.3).

The focus on social behaviour of aggregates of individuals curbs the black box problem, where social groups are assumed to follow common goals, even if some individuals may rely on particularistic utility functions (see March 1978: 588; Blossfeld & Müller 1996: 390; Hechter & Kanazawa 1997). The concept of social production functions in this context stresses universal goals as reflection of the common striving for physical well-being and social approval. What differs across individuals are only the means used to attain these universal goals (conceptualised as instrumental preferences in the realization of intermediate goals, which ultimately lead to achieving universal goals; see Lindenberg 1989; 1990b; 1991).

4.2.4 Bounded Rationality

> *"[…] The outlines of a theory begin to emerge, when we substitute for 'economic man' or 'administrative man' a choosing organism of limited knowledge and ability."*
>
> Herbert A. Simon (1955: 114)

---

[63] Again, it was Weber who pointed to an important analytical distinction: He introduced the conceptualisation of action, according to objective facts ("am objektiv Gültigen 'richtig' orientiertes ('richtigkeitsrationales') Han-

This revision, as announced by one of the protagonists of rational choice theory, Herbert A. Simon, sets in at questioning the simplifying concepts of neo-classical theory, namely, the notion of perfect information and of the actor's unlimited ability to process that information. The concept of *bounded rationality* takes into account that information gathering is a costly and time-consuming endeavour. Therefore, transaction costs of information search have to be considered, which ultimately leads to the conclusion that human agents face decision-making situations with *limited* information at their disposal. Utility maximisation in a neoclassical sense becomes an almost impossible task where actors are unable to oversee all of the possible options and their associated rewards (see Simon 1955: 106ff.).

Bounded rationality also challenges the notion of preference transitivity. Therefore, comparison of utility functions across available options may well exceed the computational capability of the actors. Additionally, alternatives most likely include "…*values that do not have a common denominator*…" (Simon 1955: 109; emphasis in the original). This is the typical case of "comparing apples with oranges." The decision whether to start a family or to continue on a career track pertains to such very different areas of life. With respect to parenthood or family formation, the gains from these options affect emotional well-being, financial security, the present and future quality of one's relationship and the possible effect of parenthood on social networks. Fundamentally different costs and benefits arise with respect to all of these areas if either the option of career pursuit or parenthood is chosen. A choice between options that relies on *maximising* utility in a strict, mathematical sense exists only in the theorist's sketchbook. In real-life choice situations, the costs and benefits involved are difficult if not impossible to weigh against each other, while alternative paths of action might be overlooked (though options may objectively exist). A more realistic description of the situation is that the actors will try to come to a decision that takes into account as much information as possible (but not all), and will weigh their preferences according to heuristic considerations, rather than basing them on a mathematically exact calculation.

Hence, bounded rationality rejects the notion that actors have an intellectual capacity, adequate to the task of arriving at an optimum solution in the sense of mathematical maximization (see Simon 1976: 135f.; 1978: 500ff.; March 1978: 590f.). Rather, the theory of bounded

---

deln") as opposed to action, oriented on an subjective interpretation of means and ends ("subjektiv zweckra-

rationality postulates *satisficing* as the appropriate analytical tool for understanding human choice processes. According to this concept, the choice falls to the alternative that presents a satisfactory solution, given the information at the actor's disposal and the cost of searching for further information.

4.2.5 Procedural Rationality

The concept of *procedural rationality* departs from another assumption of the neoclassical model, namely, the view that choice situations are static. Also based on work of Herbert A. Simon (see particularly Simon 1976), procedural rationality broadens the concept of rational behaviour by incorporating dynamic elements of learning and problem-solving into the genesis of choice processes. Although Simon did not deliberately distinguish between bounded and procedural rationality, such a conceptual distinction appears appropriate in order to theoretically distinguish a) the limited ability of human actors in gathering and processing information (bounded rationality), from b) the dynamic and procedural nature of choice *processes* (procedural rationality; see also March 1978: 592).

"Procedural or bounded rationality, […] is behaviour that is adaptive within the constraints imposed *both* by the external situation and by the capacities of the decision maker" (Simon 1985: 294, emphasis in the original). The key term here is *adaptation.* The bounded capabilities of human agents to process information are compensated for by a procedural stepwise assessment of the situation in search of a solution (i.e., learning by trial and error, see Simon 1976: 132). The concept of procedural rationality alludes to the *dynamics* of decision-making, both in the imminent choice situation and in the deliberate attainment of a goal over a longer period of time. According to Simon, the decision-making process itself consists of three central elements: 1) Actors apply heuristic advances and means-end oriented analysis to hypothetically explore a small number of alternatives; 2) In doing so, they rely on pattern recognition of past experiences to identify working solutions; 3) An internal aspiration level finally defines, which of the thus identified options will yield a satisfactory results (see Simon 1976: 136). Furthermore, feedback loops may rearrange the aspiration level. If goal attainment is

---

tionales Handeln") (Weber 1982: 433).

beyond reach under a given aspiration level, this induces either the search for new alternatives or a downward adjustment of aspirations. In contrast, if attainable options exceed the actors expectations, the aspiration level may equally experience an upward adjustment (see Simon 1959: 263). That is, while alternatives are actively explored, goals are constantly redefined in a reassessment of the current situation. Importantly, this implies a planning horizon of human decisions that goes beyond the present choice situation. This feature of procedural rationality introduces what life course theory incorporates into the notion of path-dependency (see Elder 1974; Mayer 1987). Namely, earlier paths of action influence and predetermine latter ones: "The pay offs in a particular trial might depend not only on the alternatives chosen in that trial but also on the alternatives chosen in previous trials" (Simon 1955: 113).

Simon stripped *homo-oeconomicus* of perfect information. In return, however, he granted him the benefit of insight not only into the immediate effects of goal attainment, but also into the future involvement of a particular decision. To continue with this line of thought will provide the theoretical tools for considering strategic decision-making, not only with respect to a specific situation, but also in the context of building the foundation for achieving long-term goals. Thus, the primary aim of a particular choice may be nothing else than laying the foundation for future goal attainment, while the immediate effects are of a secondary nature (for a further elaboration of this topic see Sections 4.6 & 4.7).

4.3 Why do People Have Children? – Theoretical Exploration of Preferences, Costs and Benefits

Section 4.3.1 will address the basic choice situation actors face in making fertility decisions by linking this decision to alternative life goals that compete with parenthood over scarce resources. Section 4.3.2 discusses the issue of costs and benefits involved in childbearing. This section will focus on the *nature* of costs and benefits, arguing that a simple attention to instrumental demands and gains (in terms of economic costs of parenthood, e.g.) is insufficient, and will instead stress the role of social and ideational motivations for having a child. Section 4.3.3 will once again return to the instrumental focus on having a child, prominent in micro-economic theory, particularly with reference to the theory of the New Home Economics

(NHE). This is discussed not only for the sake of completeness, but also to demarcate the position of the present study from prominent neoclassical models of fertility behaviour. Expanding that picture, Section 4.3.4 offers a broader view of central fertility goals, particularly with respect to their underlying immanent values. A summarizing overview of the various values associated with childbearing will be provided with the "value of children" approach, discussed in Section 4.3.5, while Section 4.3.6 will conceptualise family formation as intermediate goal within a social production function approach. Section 4.3 concludes by enumerating basic theoretical aspects of models of rational behaviour. Among these, the RREEMM model suggested by Lindenberg will implicitly serve as the major theoretical reference point for the various extensions introduced in the following sections.

4.3.1 Fertility as Choice under Alternatives?

Fertility-related decisions are examples of special choice situations: There are few decisions in life that carry with them such a long-term commitment and changes to previous life (see Hobcraft & Kiernan 1995). This is especially true for decisions concerning first-birth transitions (i.e., family formation). The prominent nature of these decisions in the realm of choice becomes apparent when comparing fertility decisions to relatively trivial matters, that is, trivial in the sense of the relevant considerations and the repertoire of involved alternatives. A comparatively trivial decision processes might be illustrated in buying a consumer durable like a car. For example, let us assume that the aim is to buy a car with limited fuel consumption, with average mileage and in a preferred colour, at the lowest possible (and affordable) price. The actor would choose from among a number of competing models on the market. The goal would be to buy the car that best suits one's needs within a given set of constraints and limited resources available for expenditure. The range of alternatives can be assessed and compared quite easily (price, fuel consumption, etc.), even if a maximising choice may still surpass the intellectual capabilities and informational repertoire of the actor, as pointed out in the above discussion of bounded rationality. In fact, this choice situation comes close to the means-end oriented action scheme apprehended in the neoclassical model.

Compared to such relatively simple choice situations, fertility decisions are a different matter. In the above example, the set of alternatives pertains to all cars with sufficiently low fuel

consumption. However, when analysing the decision to start a family, the alternatives are far from being so clear-cut. In order to determine the alternatives to parenthood, it is crucial to answer the question: Why do people want to have children? Suspending a detailed answer to this question until later (see Section 4.3.4), I will assume for the moment that starting a family and having a child is a primary means of self-fulfilment, and that it therefore pertains to the realization of a major life goal. Hence, the set of alternatives to choose from pertains to life course options that are considered as rewarding as having a child, or that would also offer means to self-realization or gaining social approval.

Among the potential competitors to parenthood, Barber highlights, "…educational attainment, career development and consumer spending" (2001: 101). Moreover, while family formation may be a means of self-fulfilment among actors with pronounced desires to become a parent (see Morgan 2003: 592), others focus on attaining self-realization in alternatives to parenthood (see Presser 2001). These alternatives compete with parenthood for economic resources and time in two ways: First, they compete for the time available for routine care and dedication to the role as a parent. Second, they compete for the time available and remaining within the larger life course, since fertility must adhere to specific periods in the individual's life, just like education and labour market integration. In this context, the long-term commitment of parenthood amounts to a significant cost, as it rules out many other life course choices. In contrast, parenthood can easily be postponed without any immediate or apparent sanctions[64] (see van de Kaa 2004b: 79).

A common strategy to solve this incompatibility of alternatives is to arrange plans for achieving goals sequentially (see Lauterbach 1994: 71ff.; Dornseiff & Sackmann 2003 with reference to Germany). In that sense, it is rational to antedate goals that involve sanctions for postponement (or that even become unavailable if not realized within a limited time span) like educational or occupational investments, and to delay goals like family formation that apparently contain no such sanctions. Importantly, this context denotes a choice situation where the potential alternatives (like educational attainment, career development, consumer spending or self-realization) do not share an identical, and thus comparable, utility function with parent-

[64] Following the logic of procedural rationality, the temporary focus on a life goal, competing with the aim of having a child could trigger a reassessment of one's original fertility aspirations. This might eventually lead to the

hood (see Simon 1955: 109). This makes it difficult for the actors to come to a clear resolution (see Lindenberg 1990b: 213).

4.3.2 Childbearing Decisions as Cost-Benefit Calculus

The following formal exemplifications will illustrate some of the potential considerations of costs and benefits involved in childbearing decisions and in evaluating alternatives from a rational choice perspective (for an overview see Petersen & Lübcke 2006). If an actor chooses not to have a child at a given time, there are no immediate costs involved – except maybe for the psychological costs of delaying the fulfilment of a potential life goal or the cost derived from risking that this goal may ultimately remain unfulfilled. If the actor (or the couple) opts *in favour* of having a child, different kinds of costs set in at different times. Prenatal costs include the potential effort of the pregnant woman to change health-related behaviours and the preparation of father and mother for their new roles (in both a physical and an emotional sense). Around birth and thereafter, the labour market absence of the mother and perhaps the father is necessary. Last but not least, the role as a parent requires a time intense time commitment to the child, not only with respect to care but also in an emotional, physical and economic sense. In fact, the affectual component in the lasting dedication to a child similarly reflects major *gains* derived from parenthood, as such altruistic devotion maps the child's happiness onto the parent's happiness (see Bergmann 1995: 148). Nevertheless, the parental commitment entails a high expenditure of time, which is then unavailable for the pursuit of alternative life goals.

The extent of these costs of parenthood depends on labour market constraints, family policy settings, the availability of social support networks and personal beliefs. On an abstract level, long-term costs of parenthood can also have a significant impact on biographies, with respect to the delay (or abandonment) of competing life-goals (i.e., career development). While this outline of *costs involved in becoming a parent* is far from complete and is biased towards the consideration of pursuing a career as a competing life goal, it nonetheless underscore that the transition to parenthood is a time-intensive, costly, and committing endeavour.

---

rejection of the original childbearing plans, where the temporary rejection of parenthood may become a perma-

From a more general theoretical perspective, the costs of having children can be conceptualised with two types of costs:

a) *Direct* or *immediate costs* are represented by the material costs of raising the child (e.g., education, food, and clothing) and the cost of time for caring for and raising the child.

b) *Opportunity costs* are associated with the forgone gains that might have resulted from alternative resource allocation, commonly exemplified as forgone labour income (see Leibenstein 1957; Leibenstein 1975: 161).

Economists stress the monetary and labour-market related opportunity costs involved in childbearing and birth (see Leibenstein 1957; Becker 1981). However, a broader concept of costs is certainly necessary to produce a balanced picture. The intrinsic and extrinsic demands of the parental carer-roles may be aggravated by perceived demands of partner roles (i.e., monogamy and long-term commitment). Indeed, the anticipated negative effects of parenthood on the couple relationship quality may provide a disincentive to having a first child. Furthermore, uncertainties about the reliability of the current relationship or the partner's parental qualities are additional factors that might be considered costs related to parenthood.

In contrast to the costs, the *benefits of parenthood* usually are not readily quantifiable in discrete sizes or monetary amounts (see McDonald 2000: 4). Rather, immanent benefits may arise from the transition into a life phase that provides social acceptance derived from fulfilling parental roles (see Morgan 2003: 592). The expected ***psychological benefits*** may include watching the child grow up, or extending the *social network* through an intimate parent-child relationship, which may also circumvent loneliness in old age. ***Social benefits*** can be derived from the compliance with social norms of having children (see Hobcraft & Kiernan 1995: 10f.). In this sense, starting a family generates social approval and creates social capital by increasing connectedness and social networks. Norms of parenthood and the social sanctions of remaining childless[65] vary over both time and social groups, and offer an important link to systematic variation in fertility behaviour across populations (see Leibenstein 1975: 22ff.; Bagozzi & Loo 1978: 304; Astone, Nathanson, Schoen & Kim 1999: 26; Kohler et al. 2002).

---

nent one.

Importantly, starting a family also represents an investment in a "primordial structure" that establishes solidarity among its members and kinship groups, thus strengthening social cohesion and mutual support, whereas market organisations are incapable to provide such elementary forms of social exchange (Coleman 1990: 584, 585ff.; see also Leibenstein 1975; Huinink 2001a: 150).

In contrast, the mere *economic utility* of children as workers, as economic contributors, or as old-age carers is of limited relevance in modern welfare states. Today, pension and care systems for the elderly have taken over this function (see Becker & Barro 1986: 74ff.; 1988: 16ff.; Becker 2003: 94, Petersen & Lübcke 2006: 191), and a complex societal division of labour, a differentiated educational system, and both legal and moral protections inhibit child labour contributions (see Coleman 1990: 599; Schoen et al. 1997: 333). Hence, virtually all benefits associated with the transition to parenthood in modern societies depend on the underlying values that shape the attitudes toward having a child, thus determining the preference to start a family. Yet, this view is widely neglected in the micro-economic modelling of fertility.

4.3.3 Quality versus Quantity of Children – Fertility in the New Home Economics

The prime focus of microeconomic fertility theory rests on instrumentality in both its focus on means-end driven behaviour and in terms of the resources and constraining factors that receive theoretical attention. The model of the New Home Economics (NHE) categorizes children as consumer durables, placing fertility analysis in the scope of the methodological repertoire of demand theory. In combination with the neglect of intrinsic value orientations and the lack of sufficient attention to social contexts, this framework results in a series of theoretical inconsistencies. Despites these shortcomings, the simplicity and deductibility of the neoclassical framework has led to primacy in the landscape of fertility theory. Therefore, this section (4.3.3) will briefly discuss the central tenets of the neoclassical theory of fertility, particularly

[65] Hobcraft & Kiernan stress that these social sanctions can be drastic: "Childless couples often experience intense pressure to conform, being labelled selfish, incomplete, abnormal, immoral, or irresponsible" (1995: 19).

in the NHE, in order to demarcate those findings from the theoretical framework that is being applied in the study at hand.

Earlier research contributions focused on differences in fertility existing between income groups. Becker (1960: 217) concludes that, given the exogenous pricing of children, the demand for children (and hence, fertility) should rise with available income. Empirical observation, however, shows that persons in higher income groups have *fewer* children. The initial explanation – that higher income groups possess greater knowledge of contraceptive use (ibid. 1960) – was eventually rejected. Another series of explanations (Mincer 1963; Willis 1973) regarding fertility differentials across income groups focused on children as inferior goods, arguing that among lower income groups children are preferred because superior goods are unaffordable due to budget constraints, whereas higher income groups can afford luxuries and thus reject having children. This line of reasoning was also eventually dismissed as leading down a blind alley. A common characteristic of the explanations above is that they strain reality by making exaggerated assumptions, raising doubts about their explanatory power.

A more promising approach to fertility behaviour was introduced by Easterlin, who stresses that fertility choices are closely determined by aspiration levels and internalised as part of the socialization process. In this sense, abundance in one's early years leads to greater demands on what is considered an economically sufficiently promising foundation for the transition to parenthood and vice versa (see Easterlin 1962; 1966; for more details see Section 2.1.1).

Yet, the conceptual framework which has received major attention in microeconomic fertility theory focuses on the antagonism between "quality and quantity" of children, as outlined by Becker (for details see Becker 1993). Like other microeconomic fertility theories, this framework relies on a household production function, where actors conjointly make decisions in order to maximise household utility. The number of children is limited by the shadow prices of children on the grounds of budget constraint. Although parents of a higher economic position have a larger repertoire of resources at their disposal, they also face higher costs, due to both the influence of price of time and their ability and desire to invest more in their children (e.g., education, health-care, or material support). The important conclusion is that child quality and quantity are a) substitutes, and b) stand in an inverse relation (Becker & Lewis 1973; Becker & Tomes 1976). Among higher income groups, the demand for investing in child quality is higher, thus resulting in a constraint on quantity.

This overview provides some impression of how neoclassical theory addresses fertility. The conclusion is that the theoretical elaborations of fertility behaviour that are applied in the present study need to go beyond the concepts provided by the highly artificial assumptions of the NHE. With respect to fertility planning within couples, Section 4.5.1 will return to the theoretical concepts of the NHE in order to delineate where there is a need for an expanded theoretical framework that goes beyond commonly used concepts of the NHE. For now, it should be stressed that in applying a microeconomic framework to explain fertility behaviour, fundamental doubts prevail. Ron Leshaeghe and Johan Surkyn put this to the point:

> "Obviously, working out a series of deductions starting from a manageable set of axioms is one thing; taking the deductions as valid representations of reality is another. The first act constitutes a heuristic strategy, the second amounts to the creation of one's own social reality." (Lesthaeghe & Surkyn 1988: 1)

4.3.4 Why Do People Want Children? – Instrumental versus Immanent Values[66]

"Kinder kriegen die Leute immer."

Konrad Adenauer

Microeconomic theories of the family rely heavily on a consideration of the *instrumental* role of resources to theoretically describe fertility behaviour (predominantly time and money; see e.g., Mincer & Polachek 1974; Easterlin 1975, or Becker 1981). As outlined above, however, the instrumental value of children in modern societies is severely limited in contributing to the understanding of fertility choices. Instrumental means-end based explanations of fertility behaviour, prominent in the NHE, essentially rely on the variation in opportunities (or constraints), while taking tastes or *preferences* as fixed and invariant (see particularly Stigler & Becker ; for an overview see Pollak & Watkins 1993). That is, a couple opts to have a child if opportunities favour this choice, ignoring the nature of underlying values as determinants of

[66] Aside from immanent and instrumental values as fundament of individual preferences, the possibility of genetically embedded programs to reproduce should not be underestimated. However, this topic has not received much attention in literature (for a brief discussion see Hobcraft & Kiernan , 1995: 10).

child preferences. "That […] begs the question, 'Why have children at all?' Taking preferences as given, the future course of fertility depends on the race between increasing incomes and increasing opportunity costs of children." (Lundberg & Pollak 2007: 18). Moreover, the theoretical position of assuming that preferences are stable strains reality by its oversimplification (see March 1978: 599ff.; Berk & Berk 1983; Schoen et al. 1997). And while there are incidental suggestions of the psycho-social gains involved in parenthood (see Becker 1960: 210)[67], the underlying motivation of having a child is widely being ignored in favour of an *instrumental value* based analysis of varying constraints. This is symptomatic of a theory of fertility that seeks to explain fertility differentials without being concerned with explaining why "…people continue to have children in developed societies, where children's net instrumental value is negative" (Friedman, Hechter & Kanazawa 1999: 19). The central point of this critique aims at the fact that the *immanent value*[68], attributed to having children remain widely unspecified (see Friedman et al. 1994: 380). Morgan notes that first children are desired mainly for affective reasons, while subsequent children are born mainly for reasons of child companionship and sex composition of families (2003: 592f.). In fact, already in 1909 Brentano asserted that it is essentially the valuation of love for children that competes with alternative options over the allocation of resources:

> "Was mit zunehmendem Wohlstand abgenommen hat, ist [...] der Zeugungswille. Das aber, was die Abnahme des Zeugungswillens hervorgerufen hat, sind die Zunahme der Konkurrenz der Genüsse und eine Verfeinerung im Gefühl der Kinderliebe" (Brentano 1909: 602).

Summarizing the above, an understanding of the motivations behind parenthood in modern societies crucially relies on specifying *immanent* values and beliefs. These can serve as guidelines for understanding actors' preference patterns[69] with respect to parenthood (see Friedman et al. 1994: 377ff.; Scott 2000). The important lesson here is that any elaboration of a rational

---

[67] Becker stresses that "…for most parents, children are a source of psychic income or satisfaction…" (1960: 210). Yet, this point remains a mere side note in his framework.

[68] The distinguishing terminology, separating immanent and instrumental values will be used throughout this study. It should be noted that other authors apply a different terminology to virtually the same phenomena. Thomson (1983), e.g., distinguishes between economic and emotional utilities of children.

[69] In a more detailed reflection, Birg (1991: 134f.) emphasizes that making a clear distinction between preferences and restrictions is generally a fuzzy task in outlining a rational choice setting.

choice framework of fertility requires to carefully take into account the following two key aspects of immanent value based preferences:

1) Immanent values and thus preferences for having a child are likely to ***differ inter-individually***. Some actors may generally reject having children because they do not value having a child, or because other life-goals dominate their preference for parenthood (see Barber 2001). With respect to differing fertility preferences in the context of female labour market attachment, the contributions by Hakim also offer some insight into how specific goals may dominate fertility preferences (see 2000; 2003). Nevertheless, starting a family still appears to be a central life goal, shared by most adults in modern societies (see Section 2.1.5; see also Huinink 2000: 7).

2) Immanent values that underlie child preference may ***change over time***, where individual experience, psychosocial development, or adaptation to a changed opportunity structure affects individual attitudes. In that context, the Theory of Planned Behavior, which assumes that behaviour fundamentally relies on changeable attitudes (see Ajzen & Fishbein 2005: 188), introduces a number of handy theoretical concepts (for more details see Section 4.3.6).

4.3.5 The Value of Children

Based on a cross-cultural comparison, Hoffman and Hoffman's influential "Value of Children" approach (1973) provides a broad overview of costs and benefits associated with parenthood. From a social-psychological perspective, the authors refer to the set of values as determining "motivations" for fertility decisions (see Hoffman & Hoffman 1973: 20). A significant merit of this approach resides in stressing the explicit role played by *both* instrumental costs and benefits *and* immanent values. The authors outline nine central categories, some of which, like social connectedness, have already been addressed above (see ibid. 1973: 46ff.).

The categories in Hoffman and Hoffman consist of: social acceptance into adulthood through the role of parenthood (*adult status and social identity*), the aim of passing the parent's own identity to the offspring (*expansion of the self*), and *morality*, what includes religious beliefs as well as altruism. *Primary group ties* conceptualise parenthood as a means to nourish social integration within family and relationship, and to avoid loneliness. *Stimulation,*

novelty, and fun summarize the joy derived from the child and the freshness and change having a child brings to one's life course. *Creativity and accomplishment, power and influence, social comparison and competition* refer to the improvement of one's psychological and social position, either by taking the guidance in the parent-child relationship or by complying with role demands. Finally, the category of *economic utility* refers to the financial costs of children or – on the benefit side – to children as supporters in family labour or as caregivers during old age.

As stressed above, the value of children approach provides a broad overview of both instrumental values and values that pertain to the psychosocial impetus to have children, which are based on personal beliefs as guidelines for action, i.e., immanent values (like the expansion of the self or morality). The central advancement of this seminal work lies in introducing the parental perception of children as an "intrinsic, nonsubstitutable pleasure" (Schoen et al. 1997: 335).

Hoffman and Hoffman's initial value of children approach implicitly relies on a framework of rationally choosing actors. Yet, the intrinsic motivations for parenthood are not integrated into a unifying framework. This generated substantial critique on their approach. The interplay of the various values as well as their role in a broader theoretical framework remains vague, which limits its explanatory power to a mere list of categories. The arrangement of values reflects survey-based post hoc explanations of reproductive behaviour that have been deduced from empirical observations rather than from theory (see Friedman et al. 1994: 381; Friedman et al. 1999: 19). More recently, attempts have been made to overcome the weakness of a lacking theoretical integration, by embedding the value of children approach into a general theory of action (Hoffman 1987; Klaus, Nauck & Klein 2005; Nauck 2005). In particular, the work of Nauck focuses on a re-conceptualisation of the original nine types of motivation, grouping them within two overarching goals, which are identified as the driving forces behind childbearing decisions: *social esteem* and *physical well-being* (see Klaus et al. 2005: 33ff.). In this framework, having children presents an intermediate goal in attaining higher order goals of social esteem and well-being (see Nauck 2006: 7). Importantly, these two concepts are closely related to the *universal preferences* as outlined in the social production function approach by Siegwart Lindenberg.

4.3.6 Social Production Functions and a Basic Model of Rational, Choosing Actors

Preferences and Social Production Functions

The theoretical approach of social production functions (see Lindenberg 1986; 1991) provides a key tool in determining the array of potential competitors to parenthood by specifying the array of life goals that generate a degree of *social approval* and *physical well-being* similar to that of starting a family. In that sense, social production functions also provide a tool to conceptualize and understand what drives the preference for having a child. Crucially, the social production function approach is founded on the notion that human goals ultimately rely on two types of hierarchically ordered preferences that govern human action. [70] These are:

> "Universal preferences (goals) that are identical to all human beings and therefore need no explanation, and instrumental preferences for the means that lead to ultimate goals which are in fact constraints and can thus be explained in a constraint driven approach." (Lindenberg 1990a: 741; emphasis in the original).

The social production function approach that recurs to the ultimate goals of well-being and social approval (already laid out by Adam Smith) is of the utmost value, because it sheds light on our initial problem of lacking comparability between parenthood and competing alternatives. The focal point in theoretical perspective is no longer family formation as self-evident goal, but the strife for physical well-being and social approval. Such a perspective opens the view upon an array of competing alternatives that provide the means of realizing these universal preferences. The transition to parenthood offers one means among others to obtain these universal goals.

The recourse to well-being and social approval as ultimate goals offers a conceptual advance over previous efforts to unravel the range of competing alternatives. The proper means to attain these goals are determined by instrumental preferences. These are essentially related to *general instruments*, which consist of *social status*, *behavioural confirmation* and *affection* for attaining social approval (see Lindenberg & Frey 1993: 196). For physical well-being, the

---

[70] The universal/instrumental preference distinction is already laid out in the neoclassical view (see Stigler & Becker 1977).

general intermediate goals are attaining *comfort* and *stimulation* (see ibid. 1993: 196). Instrumental preferences are shaped by *relative prices* and the *relative efficiency* of alternative means of goal attainment. Furthermore, "these means vary with social position. […] They work like standard operating procedures, and the clearer role expectations are formulated and sanctioned the clearer the social production functions" (Lindenberg 1990a: 742). That is, the *instrumental preferences* in *social production functions* structure the actor's set of alternatives, competing with the aim of family formation. By providing the outlined bridge assumptions regarding instrumental preferences, the social production function approach presents a helpful heuristics to assess and scrutinize the competing alternatives at the actor's disposal.

Relative Prices and Norms of Parenthood

In this context, labour market participation is a major competitor to family formation, since attaining either one of these intermediate goals increases both social approval and well-being. Yet, a more traditional segregation of gender roles results in lower gains in social approval for working women, and higher gains derived from a focus on the role of the homemaker. That is, the relative price of either investing in a career or having a child also depends on the situational (societal) context (see Lindenberg & Frey 1993: 196), which also affects gender role ascriptions. However, as gainful employment loses its position as a male-dominated domain, female labour market participation increasingly becomes a social norm in modern societies. That is, as the reward of social approval from labour market participation for women increases, a family focus becomes less important. This is cultivated even further by the additional physical well-being, derived from gainful employment (in the form of obtained income, see Lindenberg 1990a: 742). Indeed, the situation in modernised, yet traditionally structured societies is even more complex. Here women have to cope with contradictory role expectations: While labour market participation is rewarded with positive social sanctions in the form of behavioural confirmation and status rewards, the absence from, or neglect of familial roles continues to yield negative sanctions in the form of social disapproval.

Such forms of social disregard are enacted because bringing up children creates *positive externalities for society*. Family formation yields public goods in the form of contributions to the sustainability of the pension system, for example. Hence, normative expectations to start a family are enacted on basis of sanctions of social disapproval if one does not comply with this norm (see Coleman 1990: 599ff.), what de facto translates into costs of remaining childless

(Huinink 2001b: 10). This normative encouragement of the costly and committing step into parenthood is socially established to safeguard the positive externalities to society, which are provided by having children (see Coleman 1990: 311; Lindenberg 1990b: 214). These norms of parenthood also place high demands on child well-being, in order to socialize children to become functioning members of society. The signalled necessities, associated with parenthood include the provision of a sound basis of emotional and social support as well as economically reliable future prospects (see Oppenheimer 1994: 322). In the context of the latter, labour market participation is a complement rather than a competitor to family formation.

From a life course perspective, this also establishes implicit norms for the sequencing of life phases, in which education and occupational integration on one side, and partnership reliability and mutual trust on the other, ought to precede the transition to parenthood (see Hagestad 1991: 27; Elder 1994; for in-depth discussion see Section 4.6.1). However, actors tend to "assign a low net utility to long-term commitments in a contingent world" (Lindenberg 1990b: 213). Where normative expectations make parenthood a costly and time-consuming endeavour, this conflicts with alternative instrumental means of gaining social approval, like investing in education or a career. That is, the relative price of having a child increases. Thus, having a child in modern societies becomes a comparatively unattractive choice when opposed to other, apparently less demanding, alternatives of attaining universal goals.

A Basic Model of Rational, Choosing Social Actors

The understanding that the choice under alternatives is shaped by striving after universal goals has, at its heart, a model of man that takes into account the way that human action is socially embedded, thus extending the notion of a merely instrumental rationality. The consumption-oriented *homo-oeconomicus* is thereby confronted with *homo sociologicus*, a "socialized, norm-oriented conformer" (Lindenberg 1990a: 728). The model of Restricted, Resourceful, Expecting, Evaluating, Maximizing Man (RREEMM, for an overview see Lindenberg 1985), offers a fundament for a series of bridge assumptions that extend the rational choice core in order to obtain a realistic view of choices, particularly with regard to the actor's assessment of the "*action situation*" (Lindenberg 1992: 9).[71] The RREEMM model es-

[71] For a critical discussion of the role of bridge assumptions in rational choice theory see Kelle & Lüdemann (1995).

sentially considers actors as planful, inventive, and endowed with limited resources. In anticipating and judging future conditions, they choose the best available course of action. "The framework is thus inherently dynamic." (Lindenberg 1985).

Combined with the heuristics of social production function theory as a way to determine the array of competing alternatives (see Lindenberg & Frey 1993: 196), this provides the cornerstone of a micro-theoretical framework for the transition to parenthood as a rational decision for the study at hand. In this context, the method of decreasing abstraction (see Lindenberg 1992) can further serve to develop a sufficiently complex theoretical model of choosing actors. Starting out from a highly abstract theoretical core of rationally choosing actors, and proceeding by introducing auxiliary assumptions, the framework undergoes an incremental increase in theoretical complexity where necessary. In this sense, key findings from behavioural economics (see particularly Simon 1955; 1959; March 1978) can be integrated in the theoretical model, for example. Facilitating the method of decreasing abstraction, this is not accomplished by replacing the theoretical framework but, instead, by extending the rational choice core with bridge assumptions on limited capabilities of human actors (see Lindenberg 1990b: 205). In that context, a sparse model can define *evaluation* in the RREEMM model in the simplistic sense of evaluating goods with respect to their market value, where such a perspective suffices. In contrast, in conceptualizing family formation choices, more complex considerations of immanent values of having a child and social costs in terms of normative sanctions for remaining childless can be integrated in the theoretical framework (see generally Lindenberg 1990a: 739). By integrating increasingly differentiated auxiliary assumptions, which will be elaborated in the following sections, the theoretical model will thus be extended in order to offer an analytically accurate representation of first-birth decision processes. The RREEMM model will serve as a starting point for modelling fertility decisions in the study at hand, as it is already equipped with a versatile theoretical assemblage of extensions that serve to understand socially embedded choices.

Predicting Behaviour from Intentions

An alternative approach to rational (*reasoned*) action, grounded in a social-psychological tradition, has been elaborated by Icek Ajzen and Martin Fishbein (for the original *Theory of Reasoned Action* see Fishbein & Ajzen 1975; Ajzen & Fishbein 1980). Although the present study will focus predominantly on extensions of the RREEMM model to analyse first-birth

decisions, the Ajzen and Fishbein model makes a series of theoretical accomplishments that will contribute to the extended application of the RREEMM model, where compatible. The most important ideas that will be borrowed from the Ajzen and Fishbein model include the explicit consideration of the impact of norms and the consideration of the role of past for future behaviour. Particularly the latter concept has been introduced in the extended *Theory of Planned Behaviour* (see Ajzen 1991; 2002; Ajzen & Fishbein 2005; for an overview see Reinecke 1994, 260ff).

Applying the Ajzen and Fishbein model to childbearing behaviour, a conceptual structure emerges according to which family formation is considered 1) an *overt choice behaviour* that is a consequence of 2) a *behavioural intention* to have a child. This behavioural intention in turn depends on 3) three factors, namely, a) the *attitude* towards a having a child, b) the subjectively internalised *norms*, and c) the *perceived control over the behaviour*. These three factors are functional representations of a) *behavioural beliefs*, b) *normative beliefs*, and c) *control beliefs* with respect to a specific behaviour like starting a family (see Ajzen 1991; Ajzen & Fishbein 2005). "In fact the theory of planned behaviour differs from [its predecessor] the theory of reasoned action in its addition of perceived behavioural control" (Ajzen 1991: 183). The latter concept relies on a subjective representation of resource constraints and opportunity structure as *actual behavioural restrictions*, which constitute a mediating factor of behavioural intentions in the theoretical model (see Ajzen 1991: 182 f.).[72] Constraining factors of choice behaviour that are common ingredients in models of rational action are considered in the Ajzen-Fishbein model only in the form of background variables that mediate the interplay of actor's attitudes, norms, and control beliefs.

For the theoretical modelling of consequential choices like first-birth transitions (which are commonly based on an intense planning process), a promising group of considerations are mobilized within the theory of planned behaviour. Ajzen and Fisbein (2005) stress that there is a key distinction between *immediate action* and (long-term) *goal oriented action*, which relies on an exhaustive process of planning and development. Particularly the latter concept of goal oriented action suggests that past behaviour affects later behaviour (see Ajzen 2002) and that the actor might eventually encounter a situation that inhibits goal realisation, that is, the

actor's *volitional control* is mitigated. This notion finds theoretical representation in the concept of *actual behavioural control*: "…people usually have greater volitional control over performing a behavior than over achieving a goal" (Ajzen & Fishbein 2005: 191). These aspects of choice and planning processes over time will receive special attention in the discussion of biographical planning (see Section 4.6.2). In the meantime, I will bring back the conceptual focus on childbearing behaviour as a preference-driven choice under alternatives.

4.3.7 Summary

The key findings of this section (4.3) that will serve as the basis for subsequent elaborations of the micro-theoretical modelling of fertility pertain to psychologically and sociologically oriented approaches to rational action. Taking into account a broad variety of costs and benefits, including the social embeddedness of human action and the role of social norms – either internalised through socialization or enforced through external sanctions – the findings outlined above provide a versatile view of fertility behaviour. A key finding is that starting a family represents a major life goal that is essentially based on immanent values. In contrast, the dominant approaches in the field of fertility theory are microeconomic, with a fundamental accent on instrumentality. These approaches lack a crucial perspective on childbearing decisions, in particular, the nature of the preferences underlying these decisions. Promising analytical tools are offered by a theory of social production functions, which situate major life goals, like becoming a parent, within a conceptual framework of attaining universal goals of physical well-being and social approval. This not only opens up a perspective on competing alternatives to parenthood, but also provides a link to the RREEMM model, a view of rational choosing actors that consider and anticipate future conditions, and thus also responses from a social environment. This model will serve as a cornerstone of how rational fertility choices are conceptualised in this study.

---

[72] This model extension was mainly a response to the critique that social structural impact as well as resources and opportunities had been neglected in the original model (see Liska 1984: 62f.).

4.4 Actors in Fertility Decision-Making – It Takes Two to Tango

"All the world's a stage and all the men and women merely players"

Shakespeare, As You Like It 2/7

So far, this study has treated fertility decisions without distinguishing between decisions of men and decisions of women. In that sense, these explanations are in good company with a great deal of demographic research to the extent that the perspective of the couple is frequently neglected. Fertility, and the underlying choice process, has commonly been measured in terms of women's fertility (see Thomson, McDonald & Bumpass 1990, Thomson 1997, Hank & Tölke 2006). Although this procedure is justified for a number of practical reasons – motherhood can be reliably linked to childbirth, while the status of fatherhood is less clear for example – this procedure expunges an indispensable part of social reality. The following section is devoted to elucidating the differing constraints men and women confront as they face the option of parenthood transitions. Furthermore, this section will determine an adequate theoretical framework for addressing this ambivalent choice situation, which vacillates between extremes of individual and conjoint decision-making.

First, a gender specific perspective on fertility requires the consideration of the apparently trivial but nevertheless fundamental fact that men and women face very different kinds of constraints and parenthood requires men and women to make very different kinds of investments. Moreover, it "takes two to tango.", that is, regarding fertility decisions, it is a couple that must come to an agreement (see Morgan 1985). An initial agreement must be reached over the question of whether to have children at all. If the answer is yes, the question remains whether the couple can reach consensus on further decisions like the proper timing of parenthood. These choice processes require the coordination of individual and shared biographies. It enforces the partners' interaction with each other and links their lives and mutual biographical plans (see Elder 1991, 1994; see also Section 4.6.3).

To simplify this concept, one can distinguish between two existing theoretical perspectives on how these decisions are reached: The first perspective is common in economic theories of the family, particularly the New Home Economics (see also Section 4.4.1). According to this

theoretical concept, man and woman make joint decisions. Individual goals and motives are subordinated to the welfare of this unit, which is reflected in household utility.

The second perspective relies on an individual calculus: In deciding whether to start a family, man and woman each act and decide on the basis of their individual goals and motives (see Yamaguchi & Ferguson 1995: 274; Sobel & Arminger 1992). Assuming that a couple does not completely agree on whether (or when) to have a child, differing preferences have to be reconciled. Bargaining and exchange frameworks offer theoretical approaches for addressing the question of how agreement between actors can be achieved. Individual goals are reconciled via complex decision-making processes, based on partner interaction. Game theory provides an elaborate perspective on cooperative decision finding in bargaining processes, as well as on non-cooperative bargaining and the underlying differences in bargaining power. Section 4.4.2 will outline such a theoretical perspective in the choice to start a family.

4.4.1 Household Decisions in the New Home Economics

The New Home Economics (NHE) has been a prominent approach to understanding and modelling family-related decisions. At the heart of this theory, there is a focus on a household production function.[73] The maximisation of household utility requires an optimal allocation of time spent for market work and for household production of commodities. All household members (i.e., all members of a family or the couple) act in compliance with achieving this goal of maximisation. The distribution of labour within the household and between household and market work originates from a functional understanding of role differentiation and specialisation: Actors play out their roles according to their repertoire of skills and resources in order to advance the household as a whole. In return, household members profit from the security it provides, the servicing of individual needs and from social interaction with other household members. Hence, acting as part of a household holds a distinct comparative advantage over acting alone, last but not least, because the division of labour allows for an applica-

[73] In this sense, fertility decisions are based on the "demand" for children. This demand of the household for a flow of services, derived from children (ranging from the pleasure of seeing the child grow up to old age care provision, e.g.). The expected utility is maximized under consideration of resource expenditure for such services (which increases with child quality). This eventually leads to a utility maximising equilibrium i.e., a "proper" number of children (Becker 1960; 1993; Becker & Lewis 1973; Becker & Barro 1988).

tion of differential skills. In consequence, the theory of the NHE perceives each partner as acting in compliance with household rationality, instead of pursuing individual goals and motives. In this section (4.4.1), I will investigate a) central conclusions regarding a gender specific division of labour, and b) I will scrutinize whether the simplifying assumption of a joint household rationality offers an accurate analytical tool for the understanding of fertility decision-making.

A Framework of Gender Specific Division of Labour between Household and Market Work

Following Becker's economic terminology, "...children would be considered a consumption good" (1960: 210). The major production goods allocated in this process would be time and income. That is, in order to have children, a couple needs to provide a stable flow of these resources. The couple (respectively the household) does not only have to come to a choice regarding the relation of quality and quantity of children. First of all, the provision of the production goods required for family formation needs to be secured by an optimal allocation of time spent in household and market work.

In that context, Becker (1965: 512) assumes that one of the family's major goals is to maximise income. To achieve this maximisation, the time budgets of the wife and the husband are allocated according to comparative advantages; that is, the one who has the higher earning potential focuses on market work, while the other focuses on the household production of commodities. This household production ranges from general household chores like cleaning and cooking to fertility-related tasks like childrearing. "The various divisions of labour among family members are determined partly by biological differences and partly by different investments in human capital" (Becker 1993: 30). Following the logic of the NHE approach, men usually focus on market work, while women take over the role of the homemaker. Similarly, Mincer and Polacheck stress that "the differential allocation of time and of investments in human capital is generally sex linked…" (1974: 77). The assumption of a gender specific division of labour between household and market work underpins the notion that actors obey a shared household rationality. In deciding who does what, the spouses do not come into conflict or bargain over time allocation. Rather, their actions are devoted to maximising household utility, to which they apply a joint rationality.

However, the assumption of a biological determination of gender roles in modern societies has been considered a daring assumption and is challenged on grounds of empirical and theo-

retical research (see for example Robinson 1997; Ostner 1995; Ott 1995 or England & Buding 1997). Ferber & Birnbaum note that the only clear cut divergence between men and women "…is that only the latter can bear and nurse children" (1977: 21). They conclude that given the increase in lifespan today, "…the amount of time women spend in child-bearing today is trivial and there is no convincing evidence that the 'maternal instinct' to take care of children after they are born is any stronger than the 'paternal instinct.'" Moreover, Ferber and Birnbaum stress that the conclusion of a traditional division of labour is a theoretically dubious concept if traditional gender roles are postulated in the first place. "When women are trained for and devote much of their time to household responsibilities, while men are trained for and encouraged to enter the labour market, comparative advantage becomes little more than a self-fulfilling prophecy" (Ferber & Birnbaum 1977: 21).

Yet, a key element that continues to act in favour of a traditional division of labour is that women's returns from labour market relevant human capital are lower than those of men – even where an identical repertoire of educational skills is assumed (for theoretical elaborations see Becker 1985; Becker 1993: 54ff.). This argument is underpinned by empirical evidence. Although narrowing, the gender pay gap, with a lower obtainable market income for women, still appears to be well in place (see Blau & Kahn 2000; Mahy, Plasman & Rycx 2006). Furthermore, even where men and women are endowed with a similar amount of human capital, employers' anticipation of the double burden of work and family – particularly, if childrearing comes into play (see Shelton & John 1996; Kroska 1997 & Noonan 2001 for the U.S.) – results in a statistical discrimination of women (see Bielby & Baron 1986; Beblo 2001: 13f.; Soskice 2005: 174). The result is a lower earning capacity for women, which takes us back to the theoretical argument of a comparative advantage of a female focus on household chores.

Yet, a traditional division of labour – with absence from the labour market, not amassing human capital investments, and taking over the role of the sole homemaker – burdens the woman with a series of risks, including economic dependence on the "breadwinner" (see Ott 1995). In the theoretical framework of the NHE, this contradiction does not become apparent,

because marriage – depicted as the predominant model of mating[74] – is assumed to provide a sufficient insurance function. Men and women comply with their traditional roles and individual needs and interests are subjugated to the aim of maximising household utility.

Rising divorce rates, however, signal an erosion of stability and reliability in partnerships and shed serious doubt on the assumption that actors can be perceived as relying on the insurance function of marriage (see Bumpass 2000 for the U.S., Chan & Halpin 2002 for the UK, Klein 2003 for Germany, for theoretical elaborations see Ott 1995). With a rising likelihood of union dissolution, each of the partners has to ensure economic independence by way of career investments (see Ferber & Birnbaum 1977: 23).[75] Hence, the woman would be ill-advised to willingly take over the role of the sole homemaker. Moreover, human capital investments are considered to deteriorate quickly with labour market absence (see Mincer & Polachek 1974; Mincer & Ofek 1982), which makes it unlikely that women refrain from gainful employment, particularly given the recent developments towards female increases in higher education and in labour market participation.

Furthermore, the focus on a comparative advantage of specializing in either the household or labour market seems to blind out any effects of life-cycle developments. Robinson (1977) investigates life-cycle productivity, which decreases in the home and increases during labour market participation over the life cycle. If actors are perceived to ponder these developments (i.e., take into account a rising market income as opposed to a diminishing productivity in the home after the children have left the parental household) the female focus on a homemaker role appears to be an even less convincing perspective.

However, if gender roles can no longer be treated as given facts in the theoretical framework, the actors can no longer be assumed to willingly take over traditional roles. Conflict and instability in partnerships pollute the concept of a joint household calculus as individual-centred rationalities gain relevance. This is meaningful – not only for bargaining over the al-

---

74 This also becomes apparent from the fact that – when reasoning on couples' relations – "spouses", "husband", and "wife" remain the predominant terminology through most of Becker's opus magnum (see Becker 1993).

75 This is an even more significant topic as increasing instability in labour markets suggests dual labour market participation as insurance against occupational risks (see Kreyenfeld 2005b). Some authors however point to empirical findings that question the massive increase in occupational insecurities in recent years (see Erlinghagen & Knuth 2004 or Brückner & Mayer 2005 for Germany, e.g.). From a perspective of rational planned behaviour, however, the relevant question is whether the actors *perceive* insecurities, and thus choose strategies in order to cope with these threats (regardless if the relevant changes have actually taken place).

location of time spent for household production of commodities and for market work – but also for a consideration of individual and joint biographical plans concerning the option of parenthood.

The critical conclusion that emerges from the above discussion is that, if biological differences are indeed limited, the principle of a traditional division of labour, which is embedded in the core of the theoretical framework of the NHE, must be seriously questioned. Traditional gender roles rather reflect social norms and, as such, they are subject to social change. Treating norms and role attributions as irrevocable facts in a theory that aims at explaining social phenomena and thus social change exhibits little explanatory power. This, however, undermines the assumption that actors subjugate themselves to a joint household ratio, and instead suggests that both men and women negotiate over their interests, their share of household and market work, and how family formation is to be shaped in the context of their life plans.

Altruism in the Family and Household Rationality

> *"We are not ready to suspect any person of being defective in selfishness."*
>
> Adam Smith (1759: 446)

At first glance, the introduction of altruism into the theory of the NHE appears devoted to the aim of broadening the understanding of social behaviour outside the marketplace. The concept of altruism provides a link to understand and model reciprocity within an action theoretical framework and, more importantly, it offers an explanation for family and household integration: "[…] altruism helps families insure their members against disasters and other consequences of uncertainty: each member of an altruistic family is partly insured because all other members are induced to bear some of the burden through changes in contributions from the altruist" (Becker 1981: 3f.).

A closer look, however, reveals that the notion of altruism in the family is a key theoretical element that illuminates why otherwise selfish actors should succumb to a household-level rationality, instead of striving to maximise their own utility. In fact, the concept of altruism as applied in the NHE is a deliberate combination of selfishness and selflessness at the same time: Members of a family who act altruistic can in fact increase the household utility by doing so. While income transfers among family members leave monetary resources within the household unchanged, the individual psychic gains derived from benevolence by generosity

increase overall utility. Moreover, the benefactor can expect the goodwill of the beneficiary. Hence, he or she can expect a return in the long run or in times of need. Even if egoistic household members are present, the interaction with other altruistic family members turns their behaviour to selfless actions, as they are more likely to benefit from this behaviour than from egoistic actions in the family. The altruist will not only redistribute away from the egoist in order to enforce selflessness (see England & Buding 1997: 6). The egoist will also be encouraged to act selflessly by the promising gain of reciprocity. According to this so-called *Rotten Kid Theorem*, "the 'invisible hand' of self interest" induces selfless actions (Becker 1981: 5).

The concept of altruism in this sense provides the missing link that explains behaviour that is in accordance with the maximisation of family or household utility, rather than individual utility. Unfortunately, this approach is flawed by a series of shortcomings. By introducing the Rotten Kid Theorem, Becker admits that selfishness still plays a considerable role in the household unit. However, altruism of selfish family members can only be enacted if egoistic actions are revealed. A child that buys candy every day instead of the apple it is supposed to buy may do so without it being recognized. Preferring candy to apples, the child maximises his individual utility. For an actor, individual utility maximisation at cost of household utility is rational when his gains from egoism exceed his share of forgone household utility (due to his egoism), and he can expect to remain undetected.

If childbearing preferences differ among partners, that is, if one partner has a pronounced desire for starting a family, while the other one rejects parenthood, it seems unlikely that this fundamental disagreement regarding such a consequential transition can be reconciled by enforcing altruism. One could further argue that such a situation holds out the possibility that the woman might, for example, decide to (dis-)continue the use of contraceptives without consent, in order to assert her childbearing preferences. If this is done without the knowledge of the other, such behaviour may even remain largely unsanctioned as outlined above. Such constellations of differing preferences, which question the altruistic subjugation to household utility, are warded off in the theory of the NHE, by assuming that preferences among partners are similar (see Stigler & Becker 1977), or that the preference of the household head generally determines the choice (see Becker 1974: 16). Aside from the point that this introduces an autocratic element into a theory that otherwise focuses on functional explanations, this argu-

ment is not convincing from a theoretical perspective. The central conclusion is that with respect to consequential decisions like the transition to parenthood, the assumption of conjoint decision-making cannot be maintained simply by assuming congruent preferences or preference reconciliation by altruism.

Summarizing the above, the NHE perceives households and families as complex and well-functioning units, which obey the rule of maximising household utility. In contrast, individual-centred notions, which potentially lead to conflict, bargaining, and disagreement, do not find any room within this approach (see Robinson 1977: 178f.). As argued above, this sheds serious doubts on the ability of this theoretical perspective to serve as a framework for modelling family-related decisions in general, and fertility decisions within couples in particular. This is not to say that fertility decisions are always manifest as conflict and disagreement. However, various aspects of first birth decisions that have already been explored are subject to arrangements among partners, such as the proper time to start a family and how individual time is budgeted for childrearing and other parental tasks. While fertility decisions do not necessarily result in conflict and disagreement in couples, the sweeping assumption of consent in such matters blinds out important differences in power, preferences, and biographical plans. Taking into account these theoretical shortcomings involved in applying a joint household rationality it appears that there is no way to dismiss the notion of an individual-centred rationality.

4.4.2 Exchange-Bargaining Approaches

Many exchange and bargaining approaches have been applied in the research on family issues in dissatisfaction and debate with the theoretical foundations of the NHE (see, e.g., Ott 1998, or Lundberg & Pollak 2007). These theoretical frameworks take into account aspects of *individual* goals and motives instead of assuming joint rationality and preference. Although social exchange theory and game theory are founded on different theoretical fundaments, they belong to the same school of thought. A central ingredient is the notion that decision-making is based on interaction where each actor's influence is determined by individual ideas, preferences, and power. Social exchange theory conceptualizes human interaction as a means of trading resources. This kind of exchange is not limited to physical trade but also includes the

exchange of information, affection, dedication, and trust. Social norms and customs play an elementary part in this script (see Blau 1964; Homans 1974). In contrast, bargaining models rely heavily on the negotiation over material goods or physical contributions of actors (see Nash 1953, Sen 1990).

The following Section (4.4.2) will examine fertility decisions from the perspective of interpersonal bargaining in order to profit from the advanced theoretical and formal refinement that bargaining models have undergone during the last few decades. The discussion will borrow from exchange theory, particularly the idea that decision-making relies heavily on social contexts. Hence, aspects like dyadic trust, commitment, and gender norms will be considered here for the analysis of fertility decisions.

The Bargaining Problem in the Family

Bargaining approaches can be traced back to von Neumann and Morgenstern's work in game theory that was extended by the seminal contributions by Nash and others. The bargaining problem deals with the identification of a formal solution, given a dynamic interaction within a group of actors. The following discussion refers to bargaining within couples, i.e., within a group of two actors. Elaborate bargaining models have frequently been applied to choice processes within families. In this domain, contributions to the family are considered a form of cooperation, while the division of resources for consumption is considered conflict. "Social arrangements regarding who does what, who gets to consume what, and who takes what decision can be seen as responses to this combined problem of cooperation and conflict" (Sen 1990: 129). Actors in bargaining theory are supposed to consider their *individual* interests and preferences. The bargaining situation, however, is not necessarily characterized by reckless and egoistic maximisation of individual utility[76]. Instead, the bargainers can profit from cooperation and behave accordingly (see Sen 1989: 64). As cooperation encourages mutual support, the family unit also acts as an "insurance coalition" (Ott 1995: 81).

The family unit holds specific advantages over living alone. Some of these come from unlimited resources like social interaction, while others – like the distribution of material re-

[76] Note that the concept of maximisation is not abandoned in this framework. Maximisation merely takes a different form in bargaining approaches as the maximisation of actor A is affected by the maximisation attempts of actor B and vice versa.

sources – are limited. How partners share the use of limited resources, who contributes what to the household, and how partners specialize between household and market work are issues subject to conflict, which is solved by bargaining. In that sense, bargaining is a dynamic process of interaction during which partners continuously renegotiate new distributions on the grounds of previous agreements. A basic theoretical advancement bargaining approaches provide for the theoretical investigation of family issues is that the identification of individual utility in joint decision making "…is founded on the assumptions of rational negotiation" (Ott 1995: 83).

Gender Issues in Bargaining Approaches

Fertility can be modelled as bilateral bargaining between a man and a woman. Aside from the biological fact that women carry the burden of childbearing, giving birth, and nursing, norms regarding traditional gender roles as well as gender discrimination on the labour market still create differential access to resources for men and women (see Echevarria & Merlo 1999:267). This in turn creates different constraints for men and women when bargaining over fertility and the tasks associated with it.

Gender norms still enforce an asymmetric division of labour, where women are responsible mainly for household chores while men focus on market work (for a general overview, see Fuwa 2004; see also Section 2.2.3). A somewhat sardonic comment by Sen (1990: 130) underscores this pattern: "…Women do the cooking and are able to take an outside work only insofar as that can be combined with persisting as the cook". Accordingly, women in modern societies still tend to carry the major burden of housework (see Geist 2005, Prince Cooke 2006), and still face discrimination on the labour market (see Sections 2.2.2, 3.2 & 4.1).

This background of gender differences affects the bargaining power of men and women. Bargaining power describes an actor's ability to reinforce his/her claims in a bargaining situation. With respect to bargaining in partnerships, theoretical and empirical work on the issue has highlighted individual earnings capacities as a key indicator of bargaining power (see Ott 1995 or Lundberg & Pollak 2007, e.g.) For women in particular, the involvement in productive activities affects "contributions" and "claims" within the family, determined by their bargaining positions (Sen 1990: 148). Labour market performance supports the ability to act independently in case of separation, and hence indicates the level of dependence on intra-family transfers. Accordingly, Ferber and Birnbaum highlight that "…the bargaining power of each

individual is inevitably influenced by the degree of the dependence on the other partner…" (1977: 23). Women's pronounced focus on household chores and their concomitantly inferior labour market position undermine their ability to enforce their claims in bargaining, and thus increase their dependence.

As a result, men are on average in a better position when bargaining over the distribution of the costs of parenthood. Empirical investigations highlight that partners are well aware of their bargaining power and apply their weight in negotiations (see, e.g., Bittman, England, Folbre, Sayer & Matheson 2003) Additionally, internalized norms of traditional gender roles in general, and maternal roles in particular, structure expectations over tasks and claims, thus diminishing the woman's ability to minimize her share of parental tasks in bargaining. As the division of labour tends to become more traditional after childbirth (see Zollinger-Giele & Holst 2004: 14; Noonan 2001 for the U.S., and Geist 2005 for West Germany), parenthood causes the bargaining power of the woman to decrease. In anticipation of this development, the woman is likely to avoid or postpone parenthood in order to avoid economic dependence and a deteriorated bargaining position.

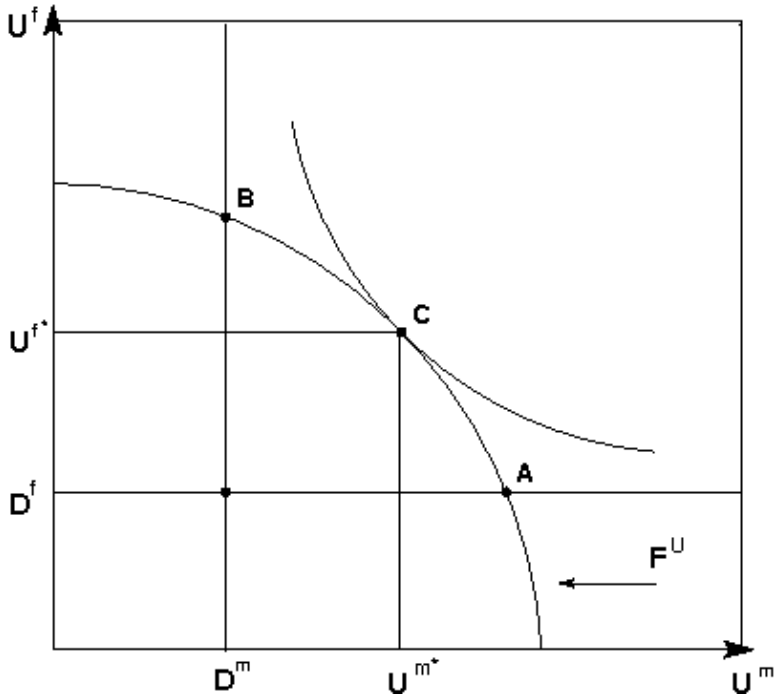
A Formal Outline of Cooperative Bargaining

A basic formal description of the bargaining problem includes that two actors have the opportunity "…to collaborate for mutual benefit on more than one way" (Nash 1950: 155). The possible outcomes of the negotiation are contingent, but both actors can expect to be better off with the bargaining outcome. They do *not compete* with each other. Instead, all actions are based on a consensus among the partners. The nature of this consensus, the bargaining problem, consists – both practically and theoretically – in finding the optimal solution, considering that the maximisation of welfare of actor A depends on the moves of actor B and vice versa. In cooperating, they "…agree on a rational joint plan of action…" (Nash 1953: 128).

The formal rules of the bargaining approach are similar to the standard rational choice setting. This includes the assumption of preference ordering and transitivity. Preferences, however, do not have to be comparable *between* actors. In fact, the difference in preferences is an essential element in creating gains that are derived from cooperation. The actors exchange goods or services of lower personal preference for items of higher personal preference, of-

fered by the collaborator (see Nash 1950: 160f.). As this kind of cooperation increases each of the individual utilities, these games[77] are also referred to as nonzero-sum games.

Figure 10: Threat Point Model of Cooperative Bargaining with a Nash Solution



Source: Ott 1995: 82.

In a bargaining situation, each of the actors will favour the specific solution that best suits his or her preferences. If the preference functions and hence the possible outcomes – say, regarding the allocation of individual time spent on specific household chores – are *non-complimentary*, the outcome of such a bargaining situation depends on the *bargaining power*, and the *threat points* of the actors A and B (see Figure 10. Actors, whose bargaining power exceeds that of the respective other can influence the distribution of payoffs in their favour. The threat point of the other player describes the limit to this possible asymmetry: If the utility one can expect from intra-family bargaining is reduced below his/her threat point (D^{m} & D^{f}), he/she will reject an agreement. In that sense, the threat or conflict point describes the minimum utility from cooperation that is acceptable to an actor before defecting from the bargaining situation. With respect to the bargaining in couples, this minimum is highly dependent

[77] The term "game" is used in reference to the terminology of game theory of which cooperative bargaining approaches form a sub-category.

on alternatives outside the dyad.[78] The outcome of the cooperative threat point model can formally be defined as a function with a Nash solution:

$$N = \left[U^m(x) - D^m\right] * \left[U^f(x) - D^f\right] \quad (0.1)$$

(see Ott 1995: 83)

In that sense, the negotiation set is limited to the area of the utility frontier (F^U), where the threat points of the two actors, D^f and D^m intersect with the utility function (i.e., points A and B form the boundaries; see Figure 10). The Nash solution is located at the point of the utility frontier farthest away from the two threat points (C). Today, cooperative threat point models constitute the standard model of intra-household bargaining (see Manser & Brown 1980; McElroy & Horney 1981; or Lundberg & Pollak 1994; Lundberg & Pollak 1996)[79].

Dynamic Interaction and the Role of Contracts

A more elaborate version of the cooperative bargaining model introduces a temporal perspective of a dynamic interaction in a non-stationary environment. In such a setting, shares and contributions do not necessarily coincide. In that sense an agreement may involve that actor A makes his contributions in t1 while actor B is supposed to offer his contributions at a later point in time, t1+n. However, such a setting formally introduces the possibility that actor B breaks his part of the agreement after having profited from the shares. Moreover, a dynamic bargaining framework introduces the possibility of changing circumstances[80]. This may involve a change in constraints, a change in preferences, but also a change in bargaining power of either actor. If actors consider the possibility of such changes over time, they can anticipate that bargaining agreements might be broken under the impact of different future circumstances. This complicates the process of coming to an agreement considerably. In cooperative bargaining approaches, the solution to this dilemma is introduced in the form of contracts. Contracts offer a means of ensuring that the agreements negotiated in the bargaining will be

---

78 The simplest of alternatives in this context is living alone, as this alternative to cooperative bargaining is accessible without any restrictions in most situations.

79 Note that these models refer to bargaining among spouses. This view can easily be extended to include non-marital bargaining. However, outside marital unions, the threat point of the partners is likely higher, as the costs of separation outside marriage are lower.

80 For a general overview of bargaining in a dynamic setting see Coles & Wright (1994). A fertility bargaining model as outlined by Ott (1989, 1995) will be discussed on p. 148.

kept in the future. Practical examples of such contracts range from mere promises to binding contracts that can be enforced legally.

Agreeing on delayed gains from reciprocity, that is, trusting the goodwill of a partner to keep a contract, also entails trust in a generally uncertain future. However, reciprocity is enacted by strong social norms, and "…between the time of Ego's provision of a gratification and the time of Alter's repayment, falls the shadow of indebtedness (Gouldner 1960: 174). In couples, emotional attraction is an additional ingredient of informal contracts, ensuring that agreements will be kept. It is a central – if not the foremost – reason for forming a dyad. Additionally, emotional ties provide mutual trust that strengthens reciprocity. In that sense, reciprocal behaviour can be perceived not only as a reflection of social norms[81] but also as an implicit contract (see Gouldner 1960: 170). Fostered by mutual trust, the returns expected on reciprocity in repeated games may serve to balance temporal asymmetries in bargaining outcomes (Ott 1989: 98f.). In this context, union duration is a key indicator, given that with a longer partnership, it is more likely that past promises and contracts have been kept, thus generating trust and fostering reciprocity between partners. Generally, the affective component in dyads fosters the stability of unions, thus reinforcing the reliability that contracts will be kept in the future. Such long-term-contracts can take the form of unuttered commitments. They manifest themselves in marriage and in the transition to parenthood, because these institutions establish higher barriers to union dissolution. Essentially, dyadic commitment, trust, and reliability are central prerequisites of the transition to parenthood.

Non-Cooperative Bargaining

In contrast to the cooperative threat point model outlined above, non-cooperative bargaining approaches do not require contracts to maintain interaction over time (see Chen & Woolley 2001: 723). Instead, actors adjust their strategies in anticipation of the moves of the respective other in order to maximise individual utility. This apparent advantage of non-cooperative models is in fact based on a conceptual limitation: "A game is non-cooperative if it is impossible for the players to communicate or collaborate in any way" (Nash 1953: 129). Whether this situation is the consequence of intentional secrecy or a lack of information does not mat-

ter from a theoretical point of view. In practical applications, however, this matter is far from trivial: intentional non-collaboration because of selfishness has been observed to evoke reactions of punishment in experimental bargaining settings – even if this punishment resulted in further costs for the punishing actor[82]. Actors enact social norms of cooperative behaviour and sanction selfishness (see, e.g., Fehr & Simon 2000). In close social relations as in families or partnerships, mutual trust and support is encouraged and rewarded by returns from reciprocity (see Sobel 2005). Accordingly, most authors assume that cooperative bargaining approaches offer the proper theoretical repertoire to model family relations (see Ott 1995: 81; Lundberg & Pollak 1994: 132; Chen & Woolley 2001: 723). This applies to fertility choices in particular, as they rely on mutual trust and long-term commitment in a unique way.[83]

Non-cooperative models, however, offer fruitful approaches to understand family bargaining when integrated as an extension to cooperative models. Lundberg and Pollak (1994, 1996; suggest a model in which the threat point lies within and not outside the dyad (for similar approaches see also Konrad & Lommerud 2000 or Chen & Woolley 2001). That is, failure to come to an agreement does not result in divorce or separation, but instead in an equilibrium of non-cooperation. This poses a valuable tool to model real-life fertility bargaining situations: As the threat point lies within the relationship, disagreement over fertility decisions is not necessarily a final disagreement. Instead, fertility choices can be renegotiated at a later point, for example, after changed circumstances have upset the equilibrium of non-cooperation.

Fertility Bargaining as Bargaining over the Distribution of Parental Costs

In order to further elaborate a formal model of fertility bargaining between partners, it is useful to outline what is subject to this special bargaining situation in detail. The parent-child relationship requires long-term commitment and creates a series of lasting costs and benefits (see Hobcraft & Kiernan 1995). Fertility bargaining, however, is essentially limited to bar-

---

[81] Gouldner in this context stresses that "…a norm of reciprocity, in its universal form, makes two interrelated, minimal demands: (1) people should help those who have helped them, and (2) people should not injure those who have helped them. (Gouldner 1960: 171).

[82] This has been conceptualized under the term of inequality aversion (see, e.g., Fehr & Schmidt 2006: 639ff.)

[83] Situations are conceivable where one partner acts on childbearing desires without the consent of the other, for example, by neglecting to use contraceptives without agreement. Such situations of non-cooperation, however, are very difficult to handle under a bargaining approach. They only exert an impact on future bargaining if the intentionality of the behaviour becomes overt (see also p. 136).

gaining over the distribution of parental *tasks* and *costs*. The following discussion will provide a demonstration of how this process functions.

Summarizing what has already been highlighted in Section 4.3.2, the ***costs*** of parenthood include the allocation of time spent on childcare, the temporary abandonment of other goals that are in conflict with the parental role, and the distribution of labour between household and paid labour. However, some burdens of parenthood cannot be redistributed through couple bargaining. Such indivisible costs include the physical strain of childbearing, giving birth, and nursing. Furthermore, inalienable costs also arise in the form of social norms that structure role expectations regarding parental dedication and commitment to a child.

Regarding *instrumental* contributions of children to their parents, with respect to the provision of old age security or family labour, *both* parents are likely to profit from such benefits (given a society still relies on child-parent transfers and has not yet established an institutionalized social security system). The security function of children as caregivers in old age or as providers of labour is closely linked to social and emotional components of parent-child ties. Such ties are also crucial with respect to the value-based gains of parenthood that play a key role in fertility rationales in modern societies. Such gains include the joy of seeing the child grow up, the passing on of one's own identity, and the social esteem gained through the parental role (see Hoffman & Hoffman 1973; Nauck 2001). The *immanent* nature of these benefits, however, widely removes them from a bargaining context. Pre-natal parental bargaining is likely to have little or no impact on the distribution of these shares between mother and father. Hence, fertility bargaining in developed societies is essentially limited to a bargaining over the distribution of costs. A number of studies of fertility bargaining in developing countries have produced evidence confirming this picture (see Eswaran 2002; Rasul 2005; Seebens 2005). Parental costs in these societies are biased strongly against women, who bear heavy burdens because of rigid traditional gender roles and extensive health-related risks of childbearing and delivery due to limited medical aid. Because of this asymmetry in cost distribution, women in developing countries show a lower average preference for having children than men do (see Rasul 2005: 3). Accordingly, empirical investigations reveal that reported fertility is lower where women are endowed with better bargaining positions (see Eswaran 2002; Seebens 2005: 20).

These applications of fertility bargaining in developing countries differ fundamentally from fertility bargaining in industrialized countries in one central respect: in modern societies, the instrumental insurance function of children has been replaced by institutions guaranteeing social security. Prosperity and social norms have led to a context in which instrumental parent-child transfers run in one direction – toward the progeny. Hence, the benefits of having a child are mainly in the immanent value ascribed to having a child (see Hoffman & Hoffman 1973, Friedman et al. 1999). If one of the partners does not derive any benefits whatsoever in being socially accepted as a parent or in seeing his or her child grow up, this lack of child preference will probably not be changeable through fertility bargaining.

Fertility Bargaining and Preference Reconciliation

The following section will explore how the distribution of child preferences between partners will affect the bargaining problem. The value-based preferences for having a child may be completely congruent between partners, resulting in either rejection of parenthood or in consensus on having a child. In the former case, the couple agrees to remain childless; in the latter case, the couple will initiate bargaining over the distribution of labour between household and paid labour, the allocation of time spent on childcare and related tasks, and so on. A theoretically more challenging constellation arises with asymmetric preferences between the partners for having a child. Such constellations may range from minor differences in immanent values attributed to having a child to utter rejection of parenthood by *one* of the partners.

In this sense, fertility bargaining can be visualized as a two-stage process: the first stage relates to the question of whether general agreement over the question of having a child can be reached. The second stage relates to fertility bargaining over the distribution of parental tasks and costs. An initial agreement about child preferences is required to proceed to the second stage of fertility bargaining. The two stages are interrelated – a relatively lower desire for children may be balanced through the agreement to take over a larger burden of the costs by the parent with the more pronounced desire to have a child.

A topic that requires further attention is the aforementioned assumption that a lower immanent value attributed to childbearing can be compensated by an instrumental trade-off. While having a child poses a life goal based on intrinsic, social, and ethical values, and thus relates to value rationality in a Weberian sense, the distribution of child-related costs and tasks follows the logic of an instrumental rationality, where both partners aim to minimize their share

of the costs. Yet, the trade-off between a lack of immanent values and reduction of instrumental costs is unlikely to work if one of the partners *completely* rejects the idea of having a child. Even if the partner with a pronounced child-preference would agree to take over *any* distributable (direct or indirect) costs of parenthood as a means of compensation, the partner lacking a child preference would still be burdened with the inalienable costs of parenthood. Hence, for him/her, the transition to parenthood would result in net costs. Even if the bargaining were extended to other areas of life where the actor with the preference to have a child could promise to take on tasks of the other partner, a positive fertility decision would be an improbable bargaining result. First, this is because the compensation of immanent values by means of instrumental contributions is limited, and second, because contracts over instrumental contributions can be broken in future negotiations, while social norms and legal contracts keep enforcing the costs of parenthood.[84]

Empirical evidence highlights that preference reconciliation is a topic that still needs to be addressed further. The assumption that couples generally share similar desires to have children (see Turchi 1975; Stigler & Becker 1977, see also the discussion in Section 4.4.1, p.136) is certainly inappropriate. Voas notes that, "studies, suggesting that spouses rarely disagree over desired family size should not be viewed as evidence that preference homogamy is nearly complete, but rather as a sign that couples are expected to come to some, possibly tacit understanding about procreation" (2003: 637). In fact, child utility seems to consist of separate, commonly differing utility functions of men and women (see Thomson 1983). In various investigations for the US, Thomson and co-authors find evidence that a significant number of spouses disagreed in their desire for having children[85] (see Thomson et al. 1990; Thomson 1997). This disagreement over childbearing plans between partners resulted in a lower likelihood of having a child. However, this evidence of a negative fertility effect of incongruent preferences should not be overestimated. Couples tend towards homogamy in mating (see

---

[84] Surrogate motherhood can be seen as an extreme example of fertility bargaining, where one "partner" has no preferences for having that child (in fact, this lack of preferences is explicitly expected by the to-be social parents). The costs of childbearing and giving birth are countered by the benefit of monetary payments. In contrast to fertility bargaining between future parents, this situation explicitly unburdens the surrogate mother from any future parental responsibilities and commitments as biological is decoupled from social parenthood.

[85] On the question of whether men or women are more successful in enforcing their fertility desires in case of disagreement, the studies mentioned do not provide clear evidence of a gender bias (see Thomson 1997; Thomson & Hoem 1998).

Kalmijn 1998), which commonly also nurtures homogamy in preferences. And although preference-related homogamy should not be misinterpreted as a universal condition (see the discussion above), the mating of partners with utterly incompatible fertility plans is also likely to be rare (see Voas 2003: 634ff.). Moreover, the desire to have a child may converge over time. As fertility bargaining may be initiated time and again, the bargaining situation in t+1 may provide an improved foundation for achieving preference congruence. The partners' fertility intentions may "…vacillate across time depending on recent experiences with their or others' children, work demands, or other activities that compete with childbearing." (Morgan 1985). Accordingly, initially incongruent fertility plans do not necessarily result in childlessness. Instead, a continuous reassessment of the compatibility of family formation plans may eventually reach a point where basic agreement about future plans leads to fertility bargaining.

In this context, an analysis by Thomson and Hoem (1998) among Swedish couples provides some interesting evidence. Partners who disagreed only slightly in their preferences to have a child were almost as likely to have a child within two years as couples that completely agreed in that desire. However, if one of the partners completely rejected having a child, expressed in the form of a veto, the couples had a very low propensity to have a child (see also Hakim 2003: 369). While obviously incompatible preferences are unlikely to be reconcilable, fertility bargaining may reconcile differences in family formation preferences when there is general agreement about wanting a child.

Summary & Formal Outline of a Dynamic Model of Fertility Bargaining

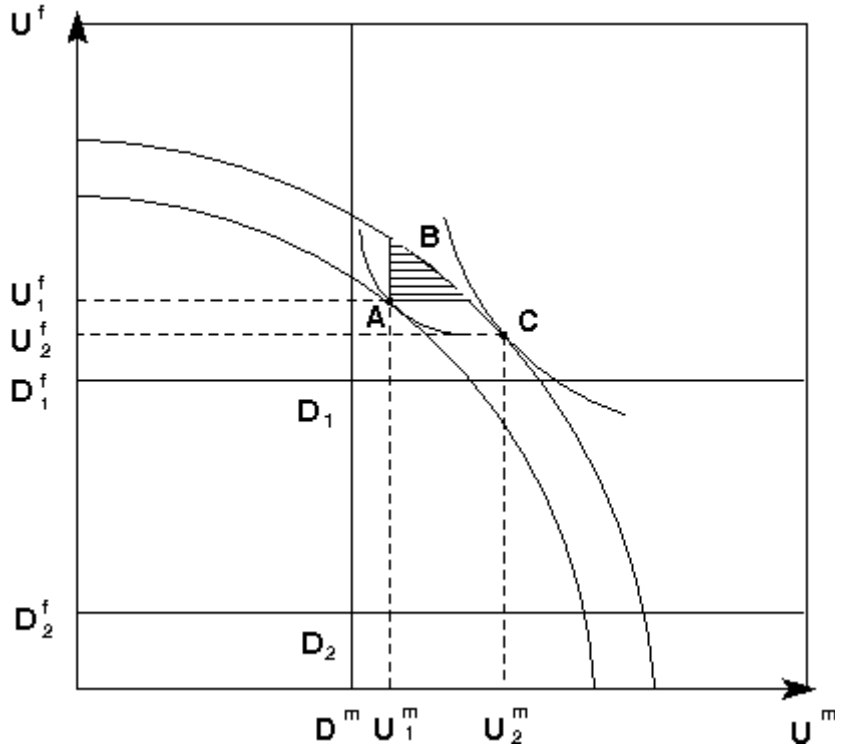
As outlined above, fertility bargaining essentially means bargaining over the distribution of costs of parenthood. In this context, the actors have to come to an agreement on how responsibilities will be shared and who contributes what to the parental tasks. This relates to the time spent on childcare, on economic contributions to the family, and on the distribution of domestic tasks and gainful employment between partners. Most of these arrangements and contributions become relevant only postpartum, and dedication to specific tasks hampers involvement in other domains (a focus on household chores hampers labour market performance, for example), thus increasing dependence on contributions from the significant other. This means that the bargaining process requires a series of contracts that ensure that each actor keeps his part of the agreement to accomplish tasks.

An elaborate bargaining model that takes these issues into account and that focuses on fertility-related bargaining is provided by Ott (1989; 1995; see also Beblo 2001). This model implicitly assumes a certain level of consent over the general aim of having a child. Bargaining processes evolve from the negotiation of contracts over the distribution of tasks in the future family. The initial model is similar to the cooperative threat point model with a Nash solution offered on page 141 in Figure 10. The actors agree on having a child. Furthermore, they arrange contracts on the future distribution of tasks related to childcare and market work.

The implications of the initial threat point model change fundamentally if the possibility of a renegotiation of the original agreements *after* childbirth is taken into account (see Figure 11, next page). The essence of the dynamic approach rests in the idea that a repeated game might involve changes in context factors that result in an increased asymmetry in bargaining power leading to a renegotiation of the original agreement in disfavour of the partner in the inferior bargaining position.

I assume that having the child will result in a net gain – both for the two partners and for the household as whole. Furthermore, I assume that having that child requires a temporal interruption of the mother's working career. This assumption is particularly justified if the bargaining is situated in a cultural and institutional context that promotes a traditional division of labour. Depending on the degree of childcare support available, the actors would also negotiate the allocation of time spent on childcare, which is also likely to result in an agreement that burdens the woman more than the man (again, taking into account common welfare policy settings and the limitations of social support networks in modern societies). Because of labour market absence, the woman's obtainable income decreases, and therefore her bargaining power decreases as well, thus lowering her threat point. If, in that period, the man is able to improve his labour market integration (empirical evidence suggests that men frequently increase their labour market engagement after childbirth), the relative bargaining power of the man and the woman diverge even further. This may lead to the situation specified in Figure 11 (next page), where the bargaining power of the woman in period 2 D^f_2 is reduced over period 1, although the utility of having the child has increased the household utility as well as the utility of each individual (point C). The man may enforce a renegotiation of the contracts (e.g., regarding childcare or market work), which may eventually result in a net decline in the woman's utility in period 2 (point A) over period 1.

Figure 11: A Dynamic Bargaining Model



Source: Ott 1995: 90.

Theoretically, this represents a departure from the common threat point model, which assumes that the failure to come to an agreement results in defect in terms of separation. In cooperative bargaining, contracts are supposed to enforce the keeping of agreements. The key conclusion drawn from this dynamic bargaining approach rests in the notion that actors (in our example, the woman) may anticipate the course of events, thus adjusting the moves in period 1 in order to debar negative consequences from broken contracts in period 2. A woman that anticipates the turn of events as outlined above has a lower propensity to opt for a child, as she will likely try to avoid a deterioration of her human capital investments, and hence avoid a deterioration of her bargaining power. The bargaining mode outlined above resembles the situation in a prisoner's dilemma setting as actors also consider the possibility of their respective others to break contracts (Ott 1995: 89f.). This opens a wide array of possible strategies and counter-strategies of the respective other. In that sense, this dynamic bargaining model displays essential features of non-cooperative bargaining.

A couple is unlikely to opt for having a child under such conditions of anticipated non-cooperation and conflict. One solution to this dilemma lies in strictly limiting the duration of

the employment interruption in order to avoid economic dependence. "Similarly, husband and wife would find it prudent not to specialize to the extent that one or both partners would find it very difficult to manage individually in case the marriage were terminated" (Ferber & Birnbaum 1977: 23). Another solution to the dilemma, as outlined above, lies in making highly reliable and binding contracts. That is, actors must convince each other that no renegotiation will be initiated in period 2. External sanctions that are based on social norms of reciprocity or on legal settings that regulate (economic) responsibilities and parental custody after a separation can enforce adherence to contracts. Perhaps more important, however, is the fact that binding contracts are established on the grounds of the mutual trust the two partners have in each other. A longer partnership has likely experienced more reciprocal exchange. Perceptions of both mutual trust *and* indebtedness due to reciprocal services most likely foster trust in the significant other to keep agreements (see Gouldner 1960: 169). Hence, the quality and the duration of a relationship plays a key role in paving the path to parenthood. In that sense, dyadic trust and reciprocity are essential resources that form prerequisites of parenthood, just like economic resources.

4.5 Choice Over Time I – Intertemporal Perspectives in Rational Choice Theory

> *"Intertemporal choices, decisions in which the timing of costs and benefits are spread out over time, are both common and important. How much schooling to obtain, whom to marry, whether to have children […] – all these vital decisions have strong intertemporal components."*
>
> George Loewenstein & Richard H. Thaler (1989: 181).

The perspective of procedural rationality (see Section 4.2.5) already addressed issues of dynamic decision-making. Key topics in this context relate to the readjustment of aspirations, the reassessment of decisions, and the long-term effects of certain choices. This section will again pick up this line of reasoning and discuss how actors behave in the context of an uncertain future. Section 4.5.1 will introduce the concept of discounted utility that theoretically in-

corporates the observation that delayed rewards are less valued than immediately available gains. Section 4.5.2 extends this line of reasoning with respect to the reversal of preferences for delayed rewards. In the context of a limited informational repertoire of actors, Section 4.5.3 will scrutinize theories on the heuristics actors apply in decision-making when dealing with an uncertain future. One conclusion of this discussion is that choices are framed crucially by the situational context of choice. Section 4.5.4 further extends this reference to frames of action with the perspective that actors also rely on well-known, reliable, and successful patterns of action in habitual behaviour. Section 4.5.5 addresses decision-making over time as a sequential and stepwise process in goal-oriented behaviour, while Section 4.5.6 assesses the possibility of inconsistencies of choice nodes in long-term goal realisation, which ultimately lead people to abandon originally intended paths of action. These elaborations on the intertemporal aspects of decision-making will establish the framework for a discussion of rational fertility choices from the perspective of biographical planning.

4.5.1 The Discounted Utility Model – Between Akrasia and Myopia

Most of the approaches integrating a dynamic perspective into rational choice theory start out from the central assumption of a discounted utility model (DU). According to this approach, the subjectively perceived utility is diminished in dependence on the amount of time a reward is delayed. That is, the longer one has to wait until gratification is received, the lower the value attributed to the utility of that alternative (see Loewenstein 1987). DU offers a concept that is capable of explaining why choice and gratification do not always coincide. In this sense, it is not a full-scale implementation of intertemporal choice processes but rather a bridge assumption that formally assesses delayed gratification.

In explaining the mechanisms underlying utility discounting, two predominant explanations have been made. The first is based on the notion of myopia: Actors tend to *ignore* the future, particularly the *distant* future. The relative value of future pleasures and pains is based on a representation of (already) experienced emotions. However, actors only have a limited capability to imagine future emotions accurately and vividly. The discounting occurs as it becomes harder for the actors to imagine such emotions the further their expectation is deferred to the

future. This results in a limited motivation to opt for alternatives which involve a delayed reward (Loewenstein 1992: 9ff.). An alternative explanation for utility discounting assumes that the discounting is not based on shortsightedness but rather on impatience. Where people tend to weight future and present equally, the discounting results from favouring close and present temptations. As a result of akrasia, the "pain of abstinence" (Loewenstein 1992: 9.) penalizes choices that comprise a delayed reward.

The perspective of discounted utility has in fact become the standard representation of the time dimension in rational choice theory. However, temporal extensions to the rational choice core introduce a series of anomalies[86], most of which have been confirmed in empirical studies. Where the rational choice framework is essentially founded on a static perspective, it is not very inviting to temporal extensions. Among the best documented of such anomalies of the discounted utility model is the tendency to get unpleasant outcomes over with quickly (instead of postponing them as predicted by the DU model; see Loewenstein 1987) or the observation that losses are discounted at a lower rate than gains (see Kahneman & Tversky 1979; Tversky & Kahneman 1991). Obviously, human choice is influenced by psychological mechanisms that are quite alien to homo oeconomicus.

4.5.2 Intertemporal Discounting and Preference Stability

One of the most severe challenges to the neoclassical paradigm is seen in the paradox of preference reversal[87]. One of the central elements of the neoclassical model is the assumption of preference stability and transitivity. According to this postulate, the aptitude for a specific alternative remains stable over the course of time (stability) and the value attributed to specific alternatives remains constant relative to other alternatives (transitivity) [88]. However, the discounting of utility undermines the assumption of stable preferences. Yet, one could conceptually distinguish between a stable preference in terms of an underlying cognitive frame and the manifestation of this preference in the form of a possibly time-variant value attributed to a

---

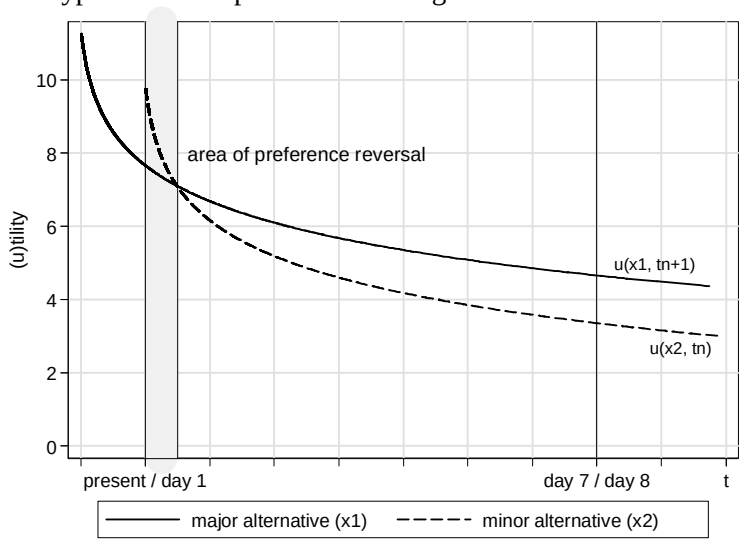
[86] For an overview, see Loewenstein & Elster 1992 or various contributions in the "Anomalies" series by Richard H. Thaler, collected in the Journal of Economic Perspectives (see, e.g., Loewenstein & Thaler 1989; Tversky & Thaler 1990; Rabin & Thaler 2001)

[87] Also known as "common difference effect".

[88] For a discussion of intransitivity over time, see Roelofsma & Read (2000).

specific choice. That, however, would seriously hamper the predictive value of the concept of stable preferences. Moreover, for competing rewards that are based on initially differing preferences, a preference reversal may occur if one or both of the gratifications are delayed (see Figure 12; for further details see Tversky, Slovic & Kahneman 1990). This assumption has been validated in experimental studies (for an overview, see Tversky & Thaler 1990).

Figure 12: Hyperbolic Temporal Discounting and Preference Reversal



Description: Utility discounting for the major alternative (x1) starts one day prior to the minor alternative (x2) (to account for the gratification of the major alternative being delayed for one day [e.g., two apples tomorrow instead of one apple today]).

According to Herrnstein's Matching Law, time discounting does not occur in a linear fashion, but rather in the form of an exponential or rather hyperbolic function. This has been observed in both human and animal behaviour (see Ainslie & Haslam 1992: 64ff.) In principle, cheaper and less-valued options are preferred over higher valued options, if the higher valued option involves a delayed gratification. Preference reversal does not only describe the paradox that less-valued alternatives may be preferred under the impact of time discounting. Which option is preferred may essentially *change* over the course of time. Rachlin & Rainieri (1992: 93) summarize this in a vivid example of child's choice between a large and a small candy bar. If both bars are offered at the same time, the child most likely prefers the larger one (unless it is on a diet). If the large bar will only be available tomorrow, the child may well prefer the smaller one now. However, if both options are delayed for one week, i.e., if the small bar will be available in seven days and the large one in eight days, the preference will most likely reverse again to the initial pattern (i.e., preferring the large bar to the small one). The cause for

this reversal effect rests in the fact of non-linear discounting. Under exponential or hyperbolic discounting, the attributed utilities of future rewards may change their relative value, if the competing rewards are delayed for a different duration (see Figure 12, previous page).

Yet, childbearing decisions are choice situations that are slightly more complex than choosing candy bars. When deciding for or against the transition to parenthood, the number and nature of options competing with the aim of having a child is of major relevance. Parenthood as well as most of the competing alternatives – such as career – involves a broad array of costs and rewards (see Section 4.3.2) that become available at different times. Hence, the actors have to consider a great number of aspects that are subject to time-discounting effects. The choice to start a family becomes rewarding within a relatively short time span (assuming that the parent already experiences the dedication to the child as one source of the joys of parenthood at childbirth, or even earlier). In contrast, the outcomes of educational and particularly career-oriented choices commonly involve a longer delay of rewards, and are subject to an uncertain future. Getting tenure, or improving ones income position through career investments is, in many cases, afflicted by uncertain outcomes. When choosing an occupational focus over starting a family, this also involves the risk that this choice may eventually preclude the option to start a family. The following paragraph will discuss the role of future uncertainties in rational behaviour from a theoretical perspective.

4.5.3 Prospect Theory and Choice under Uncertainty[89]

Although choice under uncertainty is not, by definition, a temporal extension to the rational choice setting, it is discussed in this section as it relates to behaviour, which is adapted to coping with the limited predictability of the future and thus becomes an issue of intertemporal choice.

> "Time and uncertainty are typically correlated with one another in the real world […] Anything that is delayed is almost by definition uncertain. And since uncertainty takes time to resolve, uncertain outcomes are also typically delayed." (Prelec & Loewenstein 1991: 784).

Finally, there are several model-immanent similarities between choice under uncertainty (which evolves from the expected utility theorem) and intertemporal choice (which revolves essentially around the DU model) [90]. Both reveal a highly similar set of violations of the classical rational choice model and both approaches rely on the application of utility weights[91] (see Prelec & Loewenstein 1991).

The expectation of pay-offs – an essential part in any choice process – is in many cases based on assumptions about the future. This applies to a basic model of rational choice, where it is impossible for actors to precisely determine future gains. An example of such a setting is a lottery situation, in which chance plays an integral role. This limitation in the knowledge on future pay-offs has been addressed in expected utility theory. Fundamental axioms of expected utility theory (EU) were laid out by Daniel Bernoulli in eighteenth century, and later by von Neumann and Morgenstern (1944) and Savage (1954). The basic principles evolve from a subjective representation of an uncertain future in expected utility (SEU). Actors are assumed to weight all possible outcomes of choices by the probabilities of incidence. According to the model, they do so in perfect compliance with stochastic principles.

Moving closer from a formalised rational choice model to reality, we confront the fact that actors have to cope with imperfect and often incomplete information. They have to make guesses about the future and about expectable rewards, in particular when weighting different options. In doing so, actors have to apply certain heuristics that display several regularities and depart from the axioms of classical expected utility theory (see Rabin & Thaler 2001). Using experimental applications, Kahneman and Tversky (1979) elaborate a so-called *prospect theory* that considers these patterns of decision-making under consideration of an uncertain future. According to this approach, people tend to overestimate the value of certain outcomes in disfavour of merely probable rewards. Kahneman and Tversky highlight this *certainty effect*[92] as one of the basic principles underlying a generally observable strategy of risk aversion. Friedman, Hechter, and Kanazawa (1994) argue in this context that uncertainty re-

---

89 Prospect theory can be specified as a theory that revises or replaces expected utility theory due to its incompatibility with several empirical observations (see Rabin & Thaler 2001).

90 Benzion, Rapoport an Yagil (1989) even argue that time discounting and choice under uncertainty investigate virtually the same. A similar line of argument can be found in Ott (2001: 2).

91 These take the form of probability weights in expected utility theory or of discount factors in discounted utility theory.

duction can be interpreted as a major motive for fertility decisions: Parenthood proposes a relatively reliable future as opposed to career development as one of the major competing alternatives. While the latter remains unpredictable to a certain extent, the authors suggest that family formation is a strategy that aims to establish reliability in an otherwise highly contingent world.[93]

Prospect theory incorporates a number of issues that are inconsistent with the SEU model. Most people prefer *high losses* that have a limited probability to *limited losses* that will occur for certain. This means that, in hoping to avoid losses, people tend to be risk-affine. This *reflection effect* forms an inverse counterpart to the *certainty effect* located in the domain of losses. Furthermore, prospect theory states that in choosing between gains that come at different but very small probabilities, actors tend to choose with a focus on the reward that has the highest absolute value, generally regardless of the probability of occurrence (Kahneman & Tversky 1979: 267). This diminishing marginal sensitivity to gains as well as to losses is expressed in an S-shaped value function, which conceptualizes these key assumptions of prospect theory. In this function, the decline in the negative area of losses is steeper than the incline in the positive area of gains, reflecting a general dominance of loss aversion.

Although valuable in unravelling the behavioural heuristics actors apply in choice processes, most of the experimental applications that form the foundations of prospect theory focus exclusively on monetary rewards or losses (see, e.g., Loewenstein 1987, 1988; Hershey & Schoemaker 1985; Kahneman & Tversky 1979; Tversky et al. 1990)[94]. This perpetuates some of the limitations of the neoclassical model that have been outlined above (see Sections 4.2.1 & 4.2.2), and raises questions about the applicability of prospect theory in choice processes beyond economic issues. Most real-life contexts involve choices that are more complex than one might think from the illustration of monetary gains vs. losses. Moreover, competing alternatives are often not directly comparable when they do not share a common utility function (see Simon 1959: 109f. & Section 4.2.4). Finally, there is some evidence that the actors' en-

---

92 This effect is also known as the "Alais Paradox".

93 Yet, this approach has not been left unchallenged (see, e.g., Lehrer, Grossbard-Shechtman & Leasure 1996).

94 Deviations from this rule exist (see Loewenstein 1987 for an example, involving "a kiss from your favourite movie star" or Ortendahl & Fries 2002 for discounting in health-related behaviour). Still most of these non-monetary examples rely on a metric (Tversky & Kahneman 1986), or binary representation of comparable alternatives (Rachlin & Rainieri 1992).

gagement in decision-making depends on the scope of the consequences involved. This means that – in contrast to, say, everyday consumption or lottery choices – consequential decisions are more likely to receive close attention and careful pondering. To date, however, rational choice theories have rarely addressed how long-term commitments resulting from consequential choices like the one to start a family affect people's decision-making processes.

The concept of decision *framing* offers a perspective that might shed some light on this issue. According to this concept, the mental manifestation of a problem in an actor's perception affects the decision (see Boudon 1996). Kahneman and Tversky (1979; Tversky & Kahneman 1986) observed that even minor changes in the wording and formulation of alternative scenarios affect decisions in experimental settings. They conclude that decisions are framed by the perception of a choice situation. In that sense, choices as momentous as the decision to start a family are likely to be preceded by a careful calculation of expectable rewards and involved uncertainties.

Lindenberg (1989) stresses that a pursued goal frames the choice situation by predetermining the array of alternatives. A woman with a career focus is likely to perceive this focus as a competing alternative to motherhood. Extending this view to a life course perspective, she would also consider her expectation of the manageability of combining work and family if she would opt to combine both, or the probability with which parenthood would interfere with career prospects. In the context of the framing of decisions, norms define "situationally prescribed goals" (Lindenberg 1990a: 743). If a woman has internalised a traditional gender role as part of her socialisation process or if she perceives her partner or social environment to expect her to keep such traditional norms, the alternative of occupational attainment is difficult to realize. Such norms may frame the calculation of the choice to have a child as either costly if a career focus exists, or as negligible if the preference to pursue a career is low.

4.5.4 Habits

Aside from norms, habits play a crucial role in the framing of decisions (see Lindenberg 1990a; 1992; see also Lukes 1991). Such habits do not entail direct temporal involvement. Yet, they are subject to past experience and developmental factors, which evolve over time, and thus comprise part of a dynamic background. Habits are successively consolidated by a

reassessment of past choices (see Gerber, Green & Shachar 2003). When triggered by a reoccurring stimulus, habits replace an intense decision calculus with scripts of actions that were previously found to be rewarding or successful.[95] At first glance, the role of habits as a factor influencing choice situations appears limited in relation to fertility decisions (or more generally with regard to complex and rare choices; see Ajzen 2002). The transition to first parenthood can, by definition, occur only once in a lifetime (leaving aside family formation in subsequent partnerships) and as such is not subject to habituation. Yet, habits may still be relevant for the evaluation of alternatives, competing with the aim of family formation.

Extending the concept of habits beyond the *automatic* and *spontaneous* framing of decisions to a more general framing through habitual modes of behaviour, a modus operandi of *reflexive-calculation* comes into play (see particularly the Model of Frame Selection, Kroneberg 2007: 217f.). The habitually framed actions can affect alternatives to or prerequisites of parenthood in numerous ways – for example, by affecting choices regarding continued investments in educational attainment. Habitual behaviour may evolve from repeated choices made in anticipation of educational and labour market competition. Such behaviour will probably affect the timing of family formation, when habits emerge from the aim to maximise future options in the life course by perpetually avoiding binding long-term decisions like the one to start a family (see Birg, Flöthmann & Reiter 1991).

Furthermore, such habits are also introduced through the agency of institutions (see Blossfeld & Müller 1996: 392). Educational and occupational participation mark dominant patterns in adolescents and young adult lives. Family formation, in contrast, is a step into unknown terrain (except for persons whose familial or professional background has given them contact or experience with child-related matters). This abandoning of *familiar* terrain when having a child is of relevance from a decision theory perspective. “Human cognition relies less on logic than on pattern-making; […] Stable patterns provide the necessary baseline for selection” (Loasby 2001: 393). Prior to family formation, most people are not able to get acquainted with parenthood. The fundamental change in everyday life that takes place when forming of a family is costly, violating familiar patterns of lifestyle and habits. Such a consequential decision is more likely to be made after actors have reflected on future parental roles

[95] For an application of habit formation on voting behaviour see Fiorina 1977; 1981. An application of habitual

and after important prerequisites have been met, causing the change from familiar patters and habits to be perceived as less drastic.

4.5.5 Sequential Decisions

The notion that at least some rational decisions may depend on previous experience or earlier decisions introduces not only a dynamic perspective but also a developmental perspective. Sequential decisions may differ with respect to the coherence among them. While habitual actions are only loosely interlinked through the repetition of promising, convenient, or simply successful patterns, learning processes go beyond this level. In learning by trial and error – one of the most basic forms of learning (see Popper 1995: 27) – this process is based on a reassessment of the outcomes of previous decisions and a *readjustment* of successive steps[96]. Thaler (2000), however, vividly stresses that different choice situations comprise different chances of learning:

> "In life each day is different and the most important of life's decisions, such as choosing a career or spouse, offer only a few chances of learning! […] This means that models of saving for retirement (a hard problem with few opportunities for learning) should be very different from models of frequency of milk purchases…" (Thaler 2000: 136).

Family formation as a unique decision in a biography provides almost no chances for learning. Yet, most biographies provide at least *some* opportunities to collect experience regarding successful choices in the domains of occupation and education. That is, in deciding on educational or career paths (which both compete with family formation over scarce time), people can rely on an at least rudimentary background experience to anticipate otherwise highly contingent future outcomes. Yet, they cannot rely on an equal level of knowledge in family formation.

The relevance of past decisions for future choices is also stressed by Loewenstein and Elster (Loewenstein & Elster 1992). In the context of an investigation of the utility derived di-

---

behaviour in demand theory is provided by Pollak (1970).

96 The concept of learning from sequential decisions also offers a perspective on irrational behaviour as a successful strategy employed to provide greater chances of learning (and thus of eventual success), where failure might provide vital information on a successful solution.

rectly from memory and anticipation, they stress the importance of the temporal dimension for the causal dependency of decisions:

> "Our current selves are largely at the mercy of past selves […] Our relationship to past selves is like that toward other people who care about us, but whose behaviour we cannot influence. At the same time, however, our current self plays the role of past for future selves […]" (Loewenstein & Elster 1992: 214).

The essence of this statement highlights the *unidirectional* and *causal* interconnectedness of choice processes. This leads to the conclusion that each successive choice not only alters the informational repertoire of the actor. Each step provides the actor with a changed baseline for future choices. Importantly, this also includes unexpected or unintended outcomes of previous decisions (see also Mayer 1987: 60, an in-depth discussion is provided in Section 4.6.2). In this sense, this variety of intertemporal rational choice provides a link to a life course perspective. Actors frequently harmonise choice sequences in order to pursue goals that cannot be realized in an ad hoc manner. This strategy of combining sequential decisions works by charting a series of small steps on the path towards major life course goals. It is thus essential to examine family formation from the perspective of goal attainment through sequential choices, since the transition to parenthood in modern societies relies on numerous preconditions, most of which cannot be met immediately. Although a couple may well make an ad hoc, spontaneous decision for first parenthood, this transition is nevertheless embedded in a sequence of other status passages, which suggests that refined biographical planning is required in the majority of cases (for a detailed discussion see Section 4.6.2). The development of such plans for goal-oriented action is driven by learning and habituation, and is shaped by the cultural and institutional background. "Culture influences action […] by shaping a repertoire or 'tool kit' of habits, skills, and styles from which people construct strategies of action**.**" (Swidler 1986b: 273; see also see Bourdieu 1977, as well as Section 3.4).

Summarizing the above, when progressing along sequential decisions towards goal attainment, actors have to cope with changing conditions in each successive step. But where today's calculus provides the basis for the decisions of future selves, there is always a small probability that today's choice will lead to outcomes causing previously held goals to be abandoned. The pursuit of fundamental goals like family formation through a careful process of sequential decision-making may break down over time. This might be the case if yesterday's choice in-

teracts with today's external conditions to inhibit starting a family, or where a person's past choice opens up new opportunities that lead to the abandonment of family formation plans.

4.5.6 Dynamic Inconsistency

> *"…but you must bind me hard and fast, so that I cannot stir from the spot where you will stand me [...] and if I beg you to release me, you must tighten and add to my bonds."*
>
> Homer, The Odyssey (Book XII)

As the discussion above reveals, sequential goal attainment *may* paradoxically inhibit the attainment of ultimate goals. Each time a choice is made, new doors open while others close. Each step taken toward goal realisation also entails the danger of strying from the originally intended path due to uncalculated barriers or the appearance of alternative options. In intertemporal rational choice theory, this paradox is formally described with the concept of *dynamic inconsistency* (for an in-depth discussion, see Rabinowicz 1995 or O'Donoghue & Rabin 1999)[97].

At the point where alternative paths of action appear more promising than original goals, it may be tempting to abandon the latter. Yet, this behaviour poses a problem for the actor, as well as for a theoretically stringent formulation of intertemporal choice processes. For the actor, myopic behaviour, which might lead to abandoning a long-held goal, is costly as it reduces the value of investments in original goals. This argument also provides a major motive against family formation in cases where prior investments in concurrent paths were long and costly. Vice versa, it also provides a motive in favour of family formation if this has been a long-held goal.

From a theoretical perspective, it is difficult to fit such temporally inconsistent preferences into a unified model of predictable behaviour. A first step may be a formal outline of possible pathways linked to dynamic inconsistencies (see in particular the seminal work on dynamic

---

[97] Addictive behaviour is a variety of dynamic inconsistency where today's plan puts the burden of temptation upon tomorrow's self (see O'Donoghue & Rabin 1999). For an addictive smoker, the sentence "tomorrow I will quit smoking" looks promising from today's perspective. Yet, this is perhaps not a promising strategy to quit smoking. This example also highlights a close relation of dynamic inconsistency to the DU model.

inconsistencies by Robert H. Strotz, 1956). Under the condition of an uncertain future (which is practically omnipresent in real life), actors contemplating a particular pathway might:

(1) Recognize potential conflicts with original plans and thus:

   a) Pursue a strategy of precommitment (i.e., making plan abandonment either impossible by choosing irrevocable actions or costly by contriving future penalties for the case of path divergence).

   b) Pursue a strategy of consistent planning (i.e., taking the unreliability of the future self's choices into account, thus making today's decision in such a way that consecutive choices are very likely to comply with the original plan).

(2) *Not* recognize a conflict between current choice and original plans, thus wasting the investments in a previously pursued goal (see ibid. Strotz 1956).

One might define a third case, not explicitly laid out by Strotz, but which has similar implications as (2) and which displays a very concise example of dynamic inconsistency:

(3) Actors might *recognize* a conflict between current options and original plans and still actively discard their original plans (thus devaluing any previous investments), as the new course of action promises higher immediate or long-term rewards.

Importantly, in this third case, the dismissal of previous investments is – although dynamically inconsistent – in perfect compliance with axioms of rationality. If the expected reward of a new (and previously unavailable) alternative exceeds the expected future payoffs of the original plan, the actor's best choice lies with the new option. That is, an optimising strategy might involve negligence of possibly long-held goals. From this perspective, every additional choice node entails the chance of abandoning the original goal. This poses a major threat, particularly for goals that require lasting dedication to resource-building and development, and which rely on numerous sequential choices. Hence, the more demanding a goal is – in terms of preconditions to be met, and the choices to be made – the higher the likelihood of abandoning the goal prior to its realisation (see Ajzen 1991: 183; see also the discussion in a life course context on p. 177).

The transition to parenthood is a good example of such a point in the life course, as social norms today define parental roles as highly demanding, quite frequently requiring a lot of time for preparation. This period of preparation may include efforts to build a financial safety

net to cope with an uncertain future (see Kiser 1979; Oppenheimer 1994; Tölke 2005) as well as reflection on parental roles and required skills (see Schütze 2002). Declining overall fertility also is accompanied by a general alienation from parenthood. This frequently appears as insecurity regarding parental roles, and is reflected in the vast self-help literature and diverse media providing professional advice on parenthood (see Meyer 2002). A strategy for coping with the perceived demands and uncertainties of parental roles is to set aside all necessary resources and ensure near-perfect conditions prior to family formation. This might include building a financial base, creating a stable partnership, seeking professional expertise in child-rearing, and building networks of social support among others. In many cases, attaining these skills and resources is an extensive and time-consuming process. However, as outlined above, the duration of this process and the number of consecutive decisions involved in preparing for parenthood increase the likelihood of abandoning this goal eventually. This can be the case, either due to a shift in focus to alternative goals, or due to the emergence of factors that are ultimately incompatible with parenthood. [98]

4.6 Choice over time II – Family Formation in Life Course Perspective

> *"Becoming a parent arguably involves the most profound change in an individual's life-course. The adjustment in adapting to responsibilities for a totally dependent being is substantial. The biggest change in lifestyle usually occurs with the advent of the first child…"*
>
> John Hobcraft & Kathleen E. Kiernan (1995: 2).

This section will extend my examination of the intertemporal dimension of decision-making to a life course perspective. Life course theory goes beyond expanding the time span under consideration: it also incorporates a biographical perspective on decision-making, taking into

[98] Presser (2001), e.g., stresses an increasing importance of personally available leisure time, colliding with expected parental duties, while Huinink (2001) highlights the classic argument of the dominance of career aspirations over childbearing desires. Furthermore, norms of providing a stable relationship as reliable backing of

account the structural and institutional contexts, catalysed by social change. Two major research traditions can be distinguished in life course theory. The research agenda in social and developmental psychology focuses attention on human agency, and thus investigates how individual biographies and individual development affect the life course (see, e.g., Elder 1974, Caspi & Bem 1990, or Baltes, Lindenberger & Staudinger 1998). In contrast, a more sociologically oriented agenda focuses on the life course as a paradigmatic pattern of sequences that emerge from the impact of social structure and institutions, which define constraints and orientations for agents. From this point of view, institutions predetermine biographies by structuring age-graded pathways, shaping options and expectations (see Kohli 1985, Mayer & Müller 1989; Mayer 1990; O'Rand 1996a). Nevertheless, the life course perspective should not be diminshed to an "*agency without agents*", perceiving actors merely as "*structural puppets*" (Diewald & Mayer 2008: 16; my italics). Instead, human agency is an integral part of any life course approach, and distinguishing "structural from individual effects" (O'Rand 1996b: 3) plays a vital part in this research agenda. The contribution at hand will draw on the fact that life course theory operates at the nexus of human agency and the structural and institutional opportunity structure, thus offering a link to macro-level factors in family formation choices.

In shifting the theoretical focus to a life course perspective, I will *first* extend the view on rational decision-making over time by considering the emergence of purposeful action from the perspective of biographical planning, including the effects of past and future life course trajectories. In relation to the theme at hand, biographical planning involves considerations about the proper time to have a child and the choice among competing pathways – with perhaps the most powerful competitor being gainful employment. *Second*, I consider the individual choices regarding family formation as embedded in a larger structural and institutional framework on the macro level that shapes individual biographies according to its own logic. In this sense, the following section (4.6) is predominantly oriented toward the "downward process of effect (macrostructure to microstructure) in the relationship between social change and personal development" (O'Rand 1996a: 72).

---

parenthood collide with an increasing likelihood of separation over the course of time (see Klein 2003 or Coppola & Di Cesare 2007).

Section 4.6.1 provides an initial overview of central aspects of life course theory. Key concepts will be discussed briefly in order to extend the perspective of rational choice to a horizon of *biographical planning* (4.6.2). Section 4.6.3 will focus on the fact that family formation choices emerge from intertwined biographies of partners. That the choice to start a family is usually a consequence of a negotiation within couples has already been elaborated from a perspective of rational bargaining in Section 4.4.2. In general, similar ideas are also prominent in life course theory in the concept of *linked lives* (see Elder 1994). Thus, Section 4.6.3 will elaborate the transition to parenthood and underlying choices and plans as being fundamentally affected by a biographical linking of social actors. Section 4.6.4 will turn to the role of institutions in shaping individual plans and life course trajectories, thus mediating the realization of fertility goals. The aim of this endeavour is to extend the micro-level perspective of rational choice in a way that considers the impact of the societal macro-level on the emergence and realization of individual fertility goals. This part concludes the theoretical framework of fertility decision over time.

4.6.1 Prominent Paradigms in Life Course Theory

This section will outline core themes in life course research that promise to provide cornerstones in addressing the topic of family formation as a vital passage in the life course and in analysing conflicting pathways. This initial overview of key topics in life course theory does not aim to provide a complete introduction to life course theory, nor does it aim at integrating differential and controversial research perspectives[99]. Instead, in stressing specific issues in this and in the following sections, I aim to highlight useful theoretical concepts for the analysis of family formation rationales from a perspective of biographical development under the impact of the structural and institutional background of welfare states in general and labour markets in particular.

At the heart of the life course perspective rests the idea of integrating the concept of rationally choosing agents with an intertemporal and developmental perspective, situated in the lar-

[99] A broad overview of prominent research themes in life-course theory is provided by Diewald & Mayer (2008). For an in-depth overview of the historical development of life-course theory as a research agenda, see also Mayer 2004 (p. 167ff.).

ger context of historical time (see O'Rand 1996b: 8). Individual action, in this sense, unfolds over time and under the impact of a social environment, social structure, and institutions in particular. "The life course is thus seen as the embedding of individual lives into social structures primarily in the form of their partaking in social positions and roles at the levels of social interaction, organizations, and subsystems of the society." (Diewald & Mayer 2008: 4). The institutional impact on the individual progression along the life course is marked by transitions that determine both the assignment to social positions and the subjective experience of vital turning points in individual biographies. In this sense, "…the life course has a social structural as well as a social-psychological dimension…" (Hagestad 1991: 23).

Core Themes

Elder (1994), summarizes the central ingredients in life course theory with the concepts of *social timing*, *human agency*, *linked lives*, and *social change*. In its essence, this perspective integrates key aspects that have already been stressed as crucial for the elaboration of a theoretical framework of fertility decisions. The consideration of *social change* in the life course perspective describes the differential impact of social change across cohorts, depending on the age and life stage at the time of exposure to an event change. Karl Mannheim originally outlined this idea by highlighting subsequent generations as key agents of social change (see Mannheim 1978, particularly p. 41; original 1928).

Social timing refers to expectations regarding the incidence, sequence and timing of certain transitions that consolidate into age norms. These norms offer actors orientations by specifying an age-graded "goodness of fit" in the timing of life course events that are manifested, for example, in the timing of parenthood or work careers, or in the timing of their parallel or sequential combination (Elder, 1994: 6). The concept of *linked lives* considers that choices and life trajectories emerge from the interactions of individuals, not only in a situational but also in a developmental perspective. This is crucial for the understanding that childbearing and related decisions emerge from intertwined biographies and plans of – usually – two adults. In this context, Elder stresses the "interlocking nature of human lives" (Elder 1994: 4; see 4.6.3). Furthermore, life course theory at its core has already integrated a perspective of rational choice, in considering "…an informed awareness of individuals as choice makers and agents of their lives." (ibid. 1994: 4; viz. *human agency*). Essentially, life course theory perceives

these choices not in isolation but in the awareness that humans "…are planful and make choices among options that construct their life course." (Elder 1994: 6; see also 4.6.2).

Age Norms, Age Differentiation, and Sequence Patterns

Beyond these elementary concepts outlined above, age and (biographical) time are certainly the most basic components of the life course perspective. Age offers a criterion that formulates both claims and obligations with respect to access to roles and positions. Such norms can be informal and socially formulated like determining the "proper" timing of events: for example, when to leave the parental home, when to marry, or when to have a child. They can take the form of formal norms connected with a broad array of legal obligations and claims by which welfare states structure individual lives (see Mayer & Müller 1989: 49ff.; Diewald & Mayer 2008: 4). The meanings of age, however, are not limited to chronological age, which serves as a proxy for biological maturation or psychological development; (see Shanahan, Hofer & Shanahan 2004) but are also related to the progression along life stages.

> "The notion of social time is based on the meanings of age, and refers to the ordering of events and social roles by age-linked expectations, sanctions, and options. The variable meanings of age represent social constructions which take the form of age norms and sanctions, social timetables for the occurrence and arrangement of events" (Elder 1978: 25).

Hence, age norms not only regulate the timing of when status passages *should* occur in the life course (see Levy 1991). They also embody social expectations regarding the sequencing of critical passages, the prerequisites for vital transitions – the transition to parenthood is certainly a key issue here – and the interlinking of life-phases. Social norms that regulate how career paths should be combined with motherhood differ fundamentally across countries. Hagestad describes the analysis of such "...cultural 'schedules' for the timing and sequencing of key transitions" as a vital research question (Hagestad 1991: 27). The notions of proper timing (of parenthood) enacted over peer-shared experiences provide a frame of reference that may well differ across social groups within a society, but that nevertheless has a strong effect on enforcing social norms *within* the respective social groups (see Hagestad 1991: 38).[100]

[100] There is some discussion as to whether the empirical measurement of general age norms does indeed reflect cultural representations or merely statistical averages (see Hagestad 1991: 35f.; Settersten & Mayer 1997:

Perhaps even more important is the functioning of *gender* in establishing a differential social meaning of age. Rites of passage and life patterns differ between men and women (see Levy 1991: 102f.). This is particularly true when investigating, which alternative identities and which parallel life stages are deemed a proper combination with motherhood on the one hand and with fatherhood on the other. Furthermore, with increasing longevity, various life phases and the corresponding roles have been prolonged, while timing schedules have been extended, thus postponing key transitions (Riley 1986). Yet, transition patterns with respect to fertility remain widely restricted by biological limitations, which is relevant for both women *and* men[101]. The developments of these new "time budgets of adulthood" (Settersten & Mayer 1997: 238) introduce additional potential for conflict with other life stages for which status passages are increasingly delayed, particularly in education and working life.

Institutions and the Life Course

A key perspective on the life course is based on the notion that transitions and trajectories in individual biographies are structured by the institutions that shape the life course (see Kohli 1985; Mayer & Müller 1986; Mayer 1987; Blossfeld 1990: 125; Blossfeld & Huinink 2001). These institutions regulate how actors adopt social positions and roles along the life course (as in educational facilities, in firms, or in families). Institutions catalyse the sequence and timing of vital transitions through the (normative) regulation of specific positions, thus addressing people in their roles as students, fathers, mothers, employees or pensioners. The "…institutional differentiation on the macro level of societies […is translated] onto diachronically ordered segments of the life course" (Mayer & Schoepflin 1989: 195). Gainful employment is the key institution sequentially structuring life courses into phases of preparation, participation, and retirement.

This "*triangularization*" or "*tripartitioning*" of the life course (O'Rand 1996b: 7) that has emerged in the course of societal modernization is a key theme in understanding the life course itself as an institution (see particularly Kohli 1985; for a critical discussion see Mayer

242f.). Indeed, where age norms emerge from joint experiences and life paths, shared within specific groups, norms of parenthood timing may show a great deal of variation within a society. This applies to the educational stratification in particular and differentials in social class in general (see Settersten & Mayer 1997: 236).

[101] Despite advances in reproductive medicine, the fact that fertility decreases with age is relevant for *both* women (see Bongaarts 1982) and men (see Eskenazi, Wyrobek, Sloter & Kidd 2003).

1996, Brückner & Mayer 2005). According to this view, the binding power of the *life course regime* on the one hand imposes a tight corset of rules and obligations by predetermining a temporally ordered normative pattern of life course transitions centred on employment. On the other side, the standardization of the sequence of status passages as provided by the *standard biography* ("Normalbiographie", Kohli 1985) offers orientation, reliability, and predictability in the life course, thus minimizing biographical risks and contingencies (see Kohli 1985; 1986; 1988; 1991; Levy 1996). The increase in the heterogeneity of life paths and the sequencing of vital transition patterns has been perceived in recent decades as an indicator of the "de-institutionalisation" of the life course, characterised by a loss in the regulatory power of the institutions that used to provide reliable scripts. Underlying this development is a general increase in labour market insecurities (see Brose 2003: 591ff.) and an increased discontinuity in the paths towards adulthood and family formation (see O'Rand 1996b: 4f.; see Rindfuss et al. 1988 for the US). Some scholars claim that this change is a result of an increased focus on self-realization and individualization in adult lives (Kohli 1988: 33, 44). With respect to family formation patterns, Kohli states: "Structural constraints have been replaced today by individual choice." (1991: 313, my translation[102]).

The theoretical view of de-institutionalisation states a growing capability of individuals to shape their biographies. However, social mobility is on the decline in most Western societies, while mechanisms for the reproduction of social inequality appear to have become even more rigid (see Mayer & Blossfeld 1990; Mayer 1991 for Germany; see generally Erikson & Goldthorpe 1992). Instead of assuming a generalized individuation of life courses, some of the more elaborate approaches of life course theory stress the differential impact of welfare state institutions. They argue that biographical paths are not predetermined, but nevertheless structured by varying institutional constraints, where the individual responses consolidate into general life course outcomes (see Section 3.3; see Cain 1976; Mayer & Müller 1986, 1989; Mayer & Schoepflin 1989: 193ff., 198f.; Blossfeld & Huinink 2001: 5f.; Mayer 2005).

With this background and the theoretical cornerstones of life course theory in mind, this section will return to the role of human agency in the life course. Particularly the last issue discussed, the institutional impact on life courses, will receive closer attention in Chapt. 4.7.4.

---

[102] Original: "An die Stelle des strukturellen Zwangs ist heute die individuelle Wahl getreten".

4.6.2 Family formation and biographical planning

"Life can only be understood backward; but it must be lived forward"

Søren Kirkegaard

In this section, I will outline biographical planning processes in the context of family formation. While choice refers to the immediate act of deciding, planning processes refer to the notion of a roadmap of choice sequences with which an overarching goal can best be achieved. In this context, I will consider biographical planning as a strategy employed to attain major life goals. The following discussion will highlight the logic of such strategic behaviour, in relation to the consequential and unique decisions of family formation. In this context, conceptualizing family formation as the consequence of a biographical plan is based on four central issues:

a) Biographical planning is particularly relevant with respect to goals that rely on prerequisites and that require adjustment to other contextual factors.

b) The plan usually relates to a strategy as to *how* and *when* the goal can best be attained (in terms of timing and in terms of conducive or adverse conditions).

c) This strategy outlines a notion of how to arrange biographical status passages and how to make vital choices in order to biographically progress towards goal attainment.

d) The planning – although initiated at a given point in time – is variable and can be adjusted in relation to varying contextual factors or to changes in aspirations. Hence, given the original biographical aims, choice sequences are likely to appear inconsistent from a retrospective point of view.

Overview

Fertility decisions belong to the most consequential choices in adult lives. "Thus, decisions to become a parent require complex judgements, not just about current circumstances, but also about the likely circumstances for the […] child over the ever extending period until full adulthood." (Hobcraft & Kiernan 1995: 20). Hence, the transition to parenthood is commonly preceded by extensive planning as to when, under which conditions, and with whom to found a family. With the concept of dynamic inconsistency, Section 4.5 has already addressed the issue of how initial fertility goals can become distorted over the course of time due to myopic

behaviour, changing situational contexts, or the option of alternative paths of action. Life course theory offers a formidable tool to conceptualize how such inconsistencies emerge over life paths and biographic development. In particular, the life course view is capable of analysing real-life status passages on the path to parenthood, alternatives, and exogenous (institutional) constraints from a less abstract perspective than intertemporal choice theory.

Biographically planned actions (or *life course projects* as Levy 1991: 101 calls them) contain ideas about which life course passages and sequences can and should be interconnected. They also contain notions about the conditions under which certain options will arise and when planned goals can (or should) be realized. Conceptually, this extends the perspective of dynamic choices (as outlined in Section 4.5) to the broader horizon of life courses. In this sense, biographical choices are made not with the aim of ad-hoc goal realisation but with ideas and plans for goal pursuit and future realisation. This not only extends the time spans involved and the delay of gratification (of having a child), but also increases the likelihood that plans (or underlying preferences) may be adjusted, abandoned, or become unrealisable (see Moen 2003: 244). This can occur due to the conflicting pathways or changed situational contexts that evolve over the course of time. It is particularly relevant in modern societies, where life courses have lost much of the reliability offered by institutional and normative bonds in earlier decades.

Biographical Planning, Goals and Developmental Paths

Childbearing plans are probably not formulated ad-hoc, but rather in a way that subjects subsequent choices to this particular life goal. The view that fertility plans are laid out at the beginning of the procreation phase, even down to the exact number of children – a prominent view in the New Home Economics – does not correspond to reality. While a number of first-birth transitions are probably made ad-hoc, and some pro-parenthood choices are made when facing an unplanned pregnancy (see Section 4.1), the majority of fertility plans most likely start out with a rather general idea about whether to become a parent in the future.

> "Young people do not have well-defined fertility targets when they begin conjugal life: whether they have children or not, have them early or late, when they are married or before, it all depends on a sequence of decisions made when various options presents themselves." (van de Kaa 2004a: 8).

The plan to have a child may be dedicated in some cases and rather vague in others. Yet, if this aim persists over the time, it is continuously adjusted to experience, personal development, and the various status passages of the life course (see Brewster & Rindfuss 2000: 290; Moen 2003: 244). That is, childbearing plans are subject not only to changing exogenous contexts but also to emerging and thus dynamically developing biographies. Hence, such plans are rarely cast in stone but instead need to be aligned with other (conflicting) life goals. Empirical evidence supports such a differentiated view that perceives childbearing plans as dynamically adjusted to changing constraints and experiences (see Yamaguchi & Ferguson 1995). This dynamic adjustment applies to the question of whether to have an additional child (for those who already have children), as well as to the proper timing of the transition to parenthood (for those who do not yet have children). For others, this dynamic adjustment of biographical plans affects the general question of whether to have children at all: that is, it involves reassessing the compatibility between current childbearing plans and alternative biographical options (see Hagestad & Call 2007).

A dynamic adjustment of childbearing plans is also very likely since such plans involve decisions about an uncertain future (see McDonald 2001: 7). In coping with uncertainties, actors develop specific strategies for how to realize their plan to start a family at some point in the future. However, it is impossible to plan completely, given the multitude of unknowns involved, particularly in the choice to become a parent. This applies in particular to plans made in early adulthood. Thus, the idea that childbearing plans are adjusted sequentially – starting out with a vague plan to someday start a family that becomes more pronounced over the life course as paths are set, and vital choices are made – may serve as a helpful heuristic. The fact that youth surveys show a strong preference for having children and family formation (see for example Hurrelmann & Albert 2002 for Germany), while the transition to first birth is being deferred to ever later life stages probably reflects the difficulty young adults face in trying to realize their childbearing plans.

Sequential planning in goal attainment appears to be a promising concept in other contexts as well: for example, given the limitations on daily time budgets as well as across the lifetime, plans to start a family frequently conflict with other central life course plans (see Huinink 2001b: 7). In this context, primarily education and gainful employment define the course of biographical development (see Hagestad 1991: 28). These domains compete with parenthood

over scarce time budgets, but they improve breadwinner capabilities. However, particularly female engagement in education and career exacerbates role conflicts. Hence, it is particularly women who are forced to adjust their biographical plans in order to balance conflicting role demands.

Where welfare regimes reproduce culturally embedded role ascriptions of the female caregiver, they aggravate life course conflicts instead of alleviating them. This fosters forms of biographical planning that rely on strategies of avoiding – or at least delaying – long-term commitments like parenthood (Huinink 2001a: 156). In this sense, social change in the face of declining fertility emerges from the tension between "…cultural goal setting and institutional ways of reaching these goals […] on one hand, and individual goals and action strategies on the other" (Diewald & Mayer 2008: 16f.; see also Hagestad 1991: 44).

Prerequisites of Parenthood – Intermediate Goals in Family Formation Planning

Hobcraft and Kiernan (1995: 10) state that having children is based on a normative core, even in industrialized countries with rising levels of childlessness and decreasing family sizes (see also Fishbein, Jaccard, Davidson, Ajzen & Loken 1980: 139). The notion of "proper" timing, however, is linked to prerequisite status passages rather than to a specific chronological age. Thus, first-birth timing varies within a broad age span and is limited only by the need for maturity on the one end and the biological time limits on parenthood on the other. Moreover, norms regarding the exact *sequencing* of status passages prior to parenthood have become less distinct (see Sobotka 2004: 31). The sequence of household and union formation are characterised by increasing heterogeneity and repeated occurrence within the life course (see O'Rand 1996a: 76), and particularly "marriage is no longer the critical marker for parenthood as was distinctively the case for much of the twentieth century." (Hobcraft & Kiernan 1995: 25).

The requirements of parenthood may play a much more important role in determining the proper timing of the transition to parenthood. Many of the prerequisites are closely linked to norms as to what conditions parents should provide for a child. In turn, many of these norms apply to resource building, and are thus linked to previous status passages. The road to parenthood is paved by the experience of important events such as leaving the parental home, founding one's own household, moving in together, finishing an education, and providing a sound and stable economic foundation for a future family by means of a thorough labour market integration (see Oppenheimer 1994: 322). Amassing resources and transitions through di-

verse status passages helps people to attain normative acceptance as a parent and reduce future uncertainties of economic family support. In the private domain, the same probably applies to providing a reliable and stable partnership.

For the actors, such **normatively anchored prerequisites** of parenthood may serve as guidelines of biographical planning. The "…normative or basic requirements involved in judgements about whether and when to become a parent [include…] partnership, education and training, employment, housing, and security." (Hobcraft & Kiernan 1995: 3; see also Fishbein et al. 1980: 138f.). If some of these prerequisites for parenthood have not yet been fulfilled that does not necessarily mean that a couple will decide not to have a child. However, this increases the likelihood that parenthood will be delayed until the partnership is considered by both partners to be stable and reliable, and until concerns regarding (economic) security are satisfied by a sufficiently reliable job (see Huinink 2001a: 157f.; see also Oppenheimer 1994: 323).

A major contradiction in modern life courses arises from the fact that some life stages that compete with parenthood over limited time budgets – such as the pursuit of a career or a focus on the partner dyad – can actually provide a future family with vital resources in the form of mutual support or a sound and stable economic perspective. Yet, pursuing such subordinate goals in family formation entails the risk that the related life domains will eventually overshadow plans to become a parent (see Brewster & Rindfuss 2000: 282; see also Section 4.5.6). This is particularly true for women, where parenthood and employment still compete to a large degree. Hence, in modern societies, the goal of having a child paradoxically increases investments in competing life paths, which may defer or eventually lead to the abandonment of childbearing plans by "…shifting the utility function towards goods other than children." (McDonald 2001: 5).

Childbearing Plans and Life Course Strategies

As Hobcraft and Kiernan note, "…entry into parenthood is one of the most complex lifetime judgements that individuals or couples make." (Hobcraft & Kiernan 1995: 21). Importantly, the choice for parenthood is a) a consequential step into a more or less uncertain future, and b) parenthood competes for scarce resources like money and time with other activities and involvements – particularly with education, career, and consumer spending (see Barber 2001: 104). Hence, people have to develop strategies of how to achieve subordinate goals of becom-

ing a parent (as based on internalised norms about the prerequisites of parenthood). These strategies also involve concepts of how to combine parenthood with other life stages – either simultaneously or sequentially (see Chen & Morgan 1991: 516; Huinink 2001b: 7; Dornseiff & Sackmann 2003) or how to cope with (prevailing) uncertainties. More generally, complex life goals like starting a family are arranged in accordance with strategies of how to organize life (see Bourdieu 1977; Swidler 1986b).

In this sense, biographical plans and the associated strategies of how to become a parent evolve from emerging life courses (see O'Rand 1996b: 8). Notions of how to achieve the transition to parenthood may become more clear with the progression through vital status passages, and the goal may become more pronounced over the course of biographical time. A prominent concept in life course theory is that with the de-institutionalisation of the life course, actors are becoming increasingly capable of shaping their biographies according to their own desires (see Kohli 1985; O'Rand 1996a: 76; see also Section 4.6.1).

> The conscious elaboration of life course projects, […] has come into focus through the thesis that personal experience and action are increasingly cast into a larger and historically new mode of biographical awareness (Levy 1991: 101; see also Brose & Hildenbrand 1988).

However, the increasing room for individual agency in modern life courses goes hand in hand with the necessity to balance a multitude of institutionally embedded contradictions. Abandoning options for educational and career tracks restricts future alternatives. Hence, actors tend to design their biographical plans in a way that provides long-term flexibility with respect to future paths, particularly since institutions can no longer guarantee reliable life course trajectories. Such a strategy causes people to delay consequential and irrevocable steps. The "…asymmetry between the irreversibility of childbirth and the reversibility of future plans about the timing of fertility provides an incentive to postpone the decision to have children" (Kohler et al. 2002: 652). In modern life courses, outdated institutional scripts have been replaced by self-restrictions in order to maximise future options. Brose summarizes this as a development "*from the institution of the life course to investments in the life course…*" (Brose 2003: 599; his italics, my translation[103]).

[103] „*Von der Institution des Lebenslaufs zur Investition in den Lebenslauf...*" (Brose, 2003: 599).

Birth Postponement as Biographical Strategy

In the context outlined above, birth postponement is primarily a means to avoid determining one's biography in advance, while life domains that are more sensitive to deference are biographically favoured (see Birg et al. 1991; Sackmann 2000: 147f. Huinink 2001a: 156). "The timinig of parenthood may be shifted to older ages more easily than some of these competing roles" (Chen & Morgan 1991: 516; see also Lesthaeghe & Neidert 2007: 39). In contrast, "early parenthood can interrupt [...] accumulation of human capital [...], thus narrowing and reducing the range of options later in life" (Hobcraft & Kiernan 1995: 21). Particularly for younger West German cohorts, Mayer (1996; see also Brückner & Mayer) notes an increasing divergence in the timing of family formation, differentiated by educational attainment.

Considering the increasing prevalence of uncertainties in young adult lives, birth postponement can indeed be in perfect compliance with the axioms of rationality even if the desire to have a child is pronounced. Early parenthood mitigates future options, while investments in union stability and career tend to reduce future uncertainties, thus providing a sound foundation for family formation (see Huinink 2001a: 157; Tölke 2005: 117). "Postponement can reduce the uncertainty about the costs and benefits of children, and also the uncertainty associated with the economic situation and the stability of unions in early adulthood" (Kohler et al. 2002: 652). Yet, such behaviour also fosters conditions that might eventually place family formation beyond reach.

The way in which previous life experiences shape subsequent pathways and experiences was paradigmatically laid out in Elder's *Children of the Great Depression* (1974). "Acting out tendencies, for example, restricts the availability of certain options…" (Elder 1994: 5). Given the path-dependency of the life course, earlier transitions may impede subsequent options (see Hagestad & Call 2007: 1344). Early parenthood, for example, may hinder occupational advancement. In fact, the endogeneity of the life course, where past choices and conditions affect later ones may develop an inherent biographical logic, producing a context that differs distinctively from what was originally intended (see Mayer 1987: 60, 62; Mayer & Blossfeld

1990: 311; Mayer & Diewald 2007: 516; see also Section 4.5.6, as well as Ajzen 1991: 183f. & Ajzen & Fishbein 2005[104]).

4.6.3 Linked Lives

The concept of linked lives refers more generally to all kinds of social dynamics where life course developments are interlocked across individuals, peers, kinship groups, and families in particular (see Mayer & Diewald 2007: 516; see generally Elder 1991, 1992, 1994). This section will focus on the role of intertwined pathways within the couple that forms the nucleus of fertility plans and corresponding choices. The way in which couples dynamically negotiate their childbearing plans has already been addressed in Section 4.4.2. Ott's extended bargaining model (1995) provides a particularly useful theoretical frame of reference for the emergence of negotiation processes over time. The concept of linked lives enriches this perspective by delineating a) the life course view according to which family formation plans rely on accumulated constraints, resources, and developments that emerge over life courses, and that b) parenthood is a result of the spouses' interdependent pathways, rather than consequence of solitary life courses.

This incorporates the idea that the biographical developments of men and women – along processes of psychological, educational, or occupational paths – affect each other, creating intertwined life course patterns. These complementary and interdependent pathways are based on a linkage among "individual developmental trajectories" (O'Rand 1996a: 70). This process develops cumulatively over the life course, where the behavioural impact becomes stronger, the more the spouses' biographies become entangled (Diewald & Mayer 2008: 16). Importantly, this interlocking of individual biographies also suggests that if a couple pursues a joint goal like the one to have a child, this requires a biographical reconciliation of potentially conflicting individual goals. That is, the life paths and plans of each partner need to be aligned

[104] The *Theory of Planned Behaviour* (Ajzen 1991; Ajzen & Fishbein 2005), conceptualizes the risk of straying from arranged paths of goal attainment by argues that the actors' volitional control to achieve a goal decreases for more demanding goals (see also Section 4.3.6). This is based on the assumption that impeding obstacles that are not under a person's control (*actual behavioural control*) amass over the course of time, eventually inhibiting a specific goal attainment (see Netemeyer, Burton & Johnston 1991: 89; Ajzen & Fishbein 2005: 191; for an application on family formation goals see Barber 2001).

with each other in a way that renders them compatible with parenthood. Given the increasing multitude of uncertainties in modern life, and the resulting contingency in life courses as individuals respond differently to these uncertainties, coordinating intertwined careers requires more and more effort, where life course regimes no longer provide predetermined patterns. A longer postponement of parenthood and higher likelihood of remaining childless is frequently a consequence of increased coordination costs of dyadic life patterns (Hagestad & Call 2007: 1345).

Another important issue in considering the impact of spousal linkages is how the experience of one spouse affects the other one and thus the definition of a choice situation. "The social ties among individuals serve to diffuse the experiences of change […] having long-term consequences for individuals with direct experience and for those associated with them" (O'Rand 1996a: 70). Shared goals like the one to start a family may be affected by spillover effects from other life domains. Employment-based orientations derived from events in one's work life, for example, may influence attitudes towards family life and partnership. Importantly, by sharing these experiences, the original impact may also affect attitudes of the significant other, and thus lead to a redefinition of a couple's goals and plans (O'Rand 1996a: 71).

Furthermore, spouses' lives affect each other, as the (legal) partnership status mediates social regulation, expectations placed on the other partner, and mutual support (see Elder 1994: 6). Aside from such direct relations between partners and their social environment, individual biographies are also affected by the significant other's status changes. Such *countertransitions* apply to changes in social status but also in terms of eligibility for welfare state transfers, for example, where a status change of one spouse also changes opportunities and constraints of the other. Marriage, unemployment, and pension entitlements are examples of legal states where the status change of one spouse affects claims and obligations of the other (see Hagestad 1991: 41). Yet, the fact that social ties and social status of one partner also affects the other is not limited to legal status changes of the couple. "Instead of treating individuals as isolated entities, we should consider individuals within their matrix of relationships. The opportunities and constraints faced by individuals also reflect their position in the web of interpersonal ties…" (Drobnic & Blossfeld 2004: 141).

The consideration that dyadic life patterns are intertwined is particularly important for the understanding of work-family incompatibilities in female life courses. Many contradictions and burdens that arise from combining occupational career and parenthood depend on how male and female careers are aligned over time (see Elder 1992: 634). It is not only important how parental burdens are shared between spouses at an arbitrary moment in life – whether the woman takes on a traditional homemaker role, whether she faces the double burden of combining work and family career, or whether the man and the woman share these burdens equally. Rather, the crucial question is how the division of labour is arranged across the life course, particularly since many women tend to arrange work and family tasks sequentially across the life course.

Institutional arrangements may reinforce the linking of male-female life courses, especially with respect to how the work and family roles of partners are entangled along biographical trajectories (Hagestad & Call 2007: 1341). In most western societies, outdated institutional arrangements still create incentives that suggest a gendered division of labour, whereas female career investments tend to become both norm and necessity. The "breadwinner / homemaker career template" no longer provides a reliable pattern in times of drastic social change, which is characterized by an increasing female labour force attachment, an increased sense of labour market insecurities, and "…by uncertainty, ambiguity, and ambivalence at both individual and cultural levels" (Moen 2003: 238; see also Kreyenfeld 2005a for Germany).

In coping with these ambiguities in choices, couples need to develop life course strategies for how each partner can manage to pursue individual-level aims like investing in a career, but also for how these aims can be reconciled with the joint goal of having a child (see Moen 2003: 250). In arranging plans for goal attainment, and in reconciling goals with individual life plans (which are not always compatible), partners have to develop strategies for how to synchronise careers and family life. How these strategies are arranged depends on how much of their personal (biographical) investments men and women are willing to forfeit. Moreover, it depends on which kinds of arrangements are supported by cultural and structural constraints (see Moen 2003: 246), and particularly on the extent to which institutions provide either support for attaining life goals or contradictory, outdated scripts.

4.6.4 The Micro-Macro Link Revisited – Life Course Decisions and Institutions

This section will focus on the structuring impact institutions exert on individual and coupled life courses. The major aim is to outline and exemplify operating mechanisms by which institutions shape life course choices (for a broad discussion of the cross-national variation in institutional regimes, see Chapter 3 & Section 3.3 in particular). The focus rests on outlining *central mediating mechanisms by which institutions shape the emergence of biographies* in general (see Mayer & Schoepflin 1989: 191), and on plans and decisions regarding the transition to parenthood in particular. With this approach, I will return the focus to the macro-level of society (see Chapters 2 & 3), which serves as a central frame of reference for individual behaviour. This procedure adheres to the concept of individual action being embedded in a multi-level framework (see Coleman 1990). My main interest here is in the variability of individual life trajectories that emerge as a consequence of institutional patterning, that is, the "downward process of effect (macrostructure to microstructure) in the relationship between social change and personal development." (O'Rand 1996a: 72) .

Institutional Impact on Individual Behaviour – Functioning and Mechanisms

Institutions operate by providing norms, rules, and conventions; they define guidelines of actions and behavioural expectations (see Hall & Soskice 2001: 9; Mayer & Diewald 2007: 522). By doing so, they determine criteria for rational behaviour. In shaping life courses, "…institutional contexts […] narrow down to a large extent, which life avenues are open and which are closed, which decisions are rather costly and which ones are especially rewarding." (Diewald & Mayer 2008: 5). In this sense, human agency plays the dominant role in shaping biographical trajectories, but institutions frame and define which choice/timing combinations appear to be promising and which should best be avoided. Yet, this does not fully answer the question, which margin structural and particularly institutional imposition leaves for individual choice processes (see Lindenberg 1986).

Essentially, institutionally governed selection processes in the life course determine how individuals take on positions and roles. The outcomes of these selections are also affected by societal structures in general (over the number and nature of vacant positions, e.g.) Economic and political conditions in particular shape "constraints and opportunities of social action"

(Feldhaus & Huinink 2006: 5). Yet, similar contexts of opportunity structure do not necessarily manifest themselves in similar choices, but produce heterogeneous outcomes corresponding to personal resources, individual development, psychosocial dispositions (see Huinink 2001b: 4), and "biographical anticipation and reminiscence" (O'Rand 1996a: 67). Biographical anticipation is a particularly important concept as actors are likely to anticipate the outcomes of institutional interaction, particularly with respect to "…the interconnected domains of education, family, and work." (Settersten & Mayer 1997: 234). Where institutional regulations are demanding and inflexible, the anticipated future situation is characterised by a high degree of incompatibility among different institutional domains. With respect to the high demands of education, occupation, and parenthood, actors tend to defer the transition to parenthood, as this transition is seemingly less sensitive to delays than status passages in education or in the labour market. Yet, these rigid regulations in educational and labour market related institutions (i.e., rigid with respect to the timing and delay of vital choices, e.g.) are enacted at expense of individual family formation plans.

The longer parenthood is postponed, the higher the likelihood that institutional incentives will cause people to stray from their planned paths to parenthood. This is particularly true where institutional incentives and sanctions promote quick individual responses that foster biographical commitments outside of parenthood[105]. In this sense, many institutional regulations in modern societies tend to nurture situative functional rationalities over substantial rationalities of pursuing biographical goals (see Luckmann 1975: 11; Mayer & Müller 1986: 235f.; Mayer 1987: 61; Mayer 1996: 47, 49; Mayer & Schoepflin 1989: 201). That is, myopic behaviour is institutionally fostered, while long-term goal attainment is undermined, thus increasing contingency in modern life courses. The longer the planning horizon of goal attainment, the higher the likelihood that such institutionally evoked situational and functional rationalities will drive the actors from their planned paths.

Institutional Incentive Patterns in Working Life and the Private Domain

Institutional arrangements around male life courses, and particularly regulations on working life, are still shaped by the full-time employed breadwinner template. This envisions the "un-

[105] Unemployment insurance poses an example, where benefit eligibility is linked to previous employment, thus encouraging an initial labour market integration over other foci during early working life.

encumbered, able, and willing" (Moen 2003: 239f.) male worker who dedicates full attention to his job and is supported by a female counterpart, who is dedicated to maintaining male labour power. Indeed, the work-life focused standard biography that results from this institutional arrangements has – in the form as outlined by Kohli (1985) – always been a *male* standard biography (see Mayer 1991: 671; Brose 2003: 590f.). The continuity of this male life course pattern relies heavily on a complementary female standard biography, which provides the counterpart to the breadwinner in the role of the homemaker (see Soskice 2005: 176)[106].

Paradoxically the occupational demands imposed on women today correspond to the institutional paradigm of the male unencumbered worker (see McDonald 2001: 9). That is, in the definition of occupational tasks and time schedules, labour markets structurally ignore the fact that familial reproductive tasks are still carried out mainly by women (which in turn is suggested by the script of a complementary differentiation of gender roles, enacted in family related institutions). However, *corporate actors* do *anticipate* the possibility of leave-based work interruptions. The threat of (temporarily) losing skilled female employees causes employers to engage in gender discrimination in the recruitment of staff, and to place limitations on obtainable income and tenure tracks – even for childless women. This mechanism is particularly strong in countries with generous institutionally guaranteed leave regulations (see Soskice 2005: 173f.) as birth-related work absence in such countries tends to be particularly pronounced. Although female labour market attachment is growing and demands are being raised for a more egalitarian distribution of labour, particularly in the context of parenthood, the heavy burdens on the female life course continue to exist. This is also due to basic institutions that show a great deal of inertia in their response to social change, as is the case, for example, within the family in its traditional ascription of gender roles (see Mayer 2005: 17).

Summarizing the above, the interplay of institutionally provided scripts still delineates a consistent standard biography for *men*. For women however, this standard remains filled with contradictions, particularly where investments in education are opposed by institutional incentives to subsequently reduce the value of human capital and limit future options through family formation. Hence, where a couple plans to start a family, the woman faces the ambiguous task of combining a male occupational role with a female carer role. McDonald relates this

[106] On an axis of historically graded life-course regimes, the *industrial, Fordist era* came closest to consistently de-

contradiction to a societal context of "…persistent relatively low gender equity in family-oriented institutions, [and] high gender equity in individual-oriented institutions…" such as the labour market (McDonald 2000: 438; see also Hakim 2003: 369). In having to comply with both the male earner and the female carer roles, women today tend to "bend their personal lives to their careers, rather than the reverse" (Moen 2003: 246). One functional response to this institutionally created pattern of doubled burdens is a parallel combination of work and family roles, where occupational efforts are reduced. This, however, leads to the aforementioned situation of a higher prevalence of labour market risks among women, lower obtainable income, and reduced career track options among women[107]. The other option is a phase-specific reduction of efforts in either occupation or family, that is, a *sequential combination of work and parental tasks*, where family formation is postponed until labour market integration is considered reliable.

Risk and Uncertainty in Life Courses and Institutional Responses

Institutions mitigate uncertainty in life courses by providing guidelines for action. However, labour market and family institutions (and to a wider extent religious and policy institutions) today define rules that – in their interaction – foster the emergence of conflicting life trajectories. Moreover, the spreading deregulation of labour markets fosters the emergence of life course risks, leading to insecurities in biographical plans (see McDonald 2001: 10; DiPrete 2002). Phases of precarious employment, of work interruptions and of unemployment become more prevalent, even in societies that were formerly characterised by highly regulated markets and reliable occupational relations (see Brückner & Mayer 2005 for Germany; see generally Mayer 2005). However, where fragile employment patterns become more prevalent, a traditional breadwinner/homemaker differentiation endangers the economic fundaments of family formation plans. Hence, female labour market attachment is also a compensation of under-

termined complementary life-course scripts of male worker and female homemaker (see Mayer 2005: 26).

[107] The example of the German parental leave regulations before 2007 provides a case in point that institutional approaches aimed to prevent negative occupational effects of childbirth rarely provide a remedy against labour market discrimination. Generous job-return guarantees fostered long periods of labour market absence, which tended to nurture a shift to the female carer role. In combination with a low coverage of public childcare, this resulted in high likelihood of permanent labour market exit, or in a limitation of occupational engagement to part-time work among mothers, respectively.

mined male earnings position, and thus does indeed serve to enact biographical plans of family formation (see Bumpass 1990: 489; Huinink 2001b: 2).

Welfare state institutions in many western countries today tend to restrict their protection to the severest of life course risks. Life courses are segmented into phases that consolidate different life course risks. Depending on the level of welfare state protection, actors are forced into specific choices to protect themselves against such risks. The strategy of both men and women to focus on education and initial labour market integration prior to family formation are examples of such phase-specific foci. The consequence is that the room for individual choices and plans is narrowed, where institutional incentive structures tend to create a biographical logic that undermines the attainment of life-goals (see Mayer & Müller 1989: 53; etc).

Where risks of economic dependence in individual life courses culminate in early adulthood and again at an advanced age, the institutional mechanisms of intergenerational solidarity provide limited means to protect against these risks. The family is a key institution providing protection against such life course risks. Security, protection, and stabilization in fragile life-phases is provided by means of familial solidarity (see Mayer 2005). Yet, the integrity of the family as protective institution is at stake where family formation entails incalculable economic prospects. "[…] High incomes in 'prime age' working life permit most individuals to save, old age security is possible to buy in the market. But the same does not apply to young child families whose savings capacity is severely reduced" (Esping-Andersen 1999: 41). In anticipation of this situation, it is – once again – rational for couples who plan to have a child to prepare a sound economic basis, or to invest in their career until earnings capacities and occupational standards offer sound prospects for family formation, thus limiting the risk of having to rely on welfare. Yet, this also holds the danger that biographies will eventually be rendered incompatible with parenthood – either because the postponement eventually exceeds biological boundaries of parenthood, or because the focus on a career track biographically dominates the plan to start a family.

4.6.5 Summary

This section has discussed the transition to parenthood as the consequence of rational choice and planning from a life course perspective. In this view, **the transition to parenthood relies on plans and choices that emerge from individual biographies** (see O'Rand 1996b). These in turn are shaped by individual resources, psychosocial dispositions, and external constraints as determined by the structural and institutional background. In this context, **fertility choices and plans are affected by *past* experiences** and decisions (see Elder 1994), **and by the anticipation of future circumstances**. The determination of whether family formation is a promising or an unpromising endeavour is essentially shaped by institutional contexts. In particular, institutionally embedded scripts assign occupational and family role expectations in male and female life courses, while institutional protections against life course risks determine people's perceptions of biographical security and stability, which are prerequisites to family formation (see Mayer 2001; Mayer 2005; see also Section 3.4).

Childbearing decisions are hardly isolated, independent choices within the life course. Instead, **individual biographies are shaped by concurring and interdependent trajectories** (see Elder 1995). Hagestad & Call discuss the "…complex bundle of interrelated transitions in several domains: leaving home, finishing school, starting work, entering marriage, becoming a parent" (2007: 1341) as manifestations of transitions that open intertwined trajectories. The way in which actors progress along these trajectories crucially affects their paths towards family formation. In this context, educational and occupational pathways in particular compete with parenthood over limited time budgets.

Moreover, **biographical pathways are interlinked between partners**. Where, for example, individual career aspirations lead to plans that are incompatible with a partner's preferences for the timing of family formation, couples have to align their biographical plans in a way that makes them compatible with the joint goal of starting a family. Against this backdrop, couples have to develop biographical strategies for how to best achieve their fertility goals, given their individual aspirations and their expectations of future circumstances. These strategies can determine how parental and occupational burdens are distributed between partners, as well as how occupational and parental roles are arranged over partnered biographies.

A life course perspective furthermore highlights that the arrangement of biographical plans is always oriented toward the social environment and societal contexts**. Institutional scripts and culturally embedded expectations fundamentally shape individual biographies**. This is the case where labour markets combine high demands on occupational flexibility with the promotion of female labour market attachment, whereas more traditional institutions encourage a gender-specific division of labour in the family. Where institutional incentives and sanctions create such contradictory role demands, actors have to adapt their biographical goals of family formation to these kinds of "outmoded constraints" (Moen 2003: 243). A common response is that consequential and irrevocable steps like starting a family are delayed in order to maintain long-term flexibility with respect to future paths. However, the postponement of childbirth and sequential combination of roles to avoid work-family conflicts increases the risk of producing an endogenous life course logic that will eventually preclude the transition to parenthood (see generally Mayer 1987: 60).

Concluding from the above, a life course perspective suggests *two key elements* as crucial for the understanding of major choices like the one to start a family. 1) **Complex choices emerge from biographical tracks** that develop over time in a social environment, and 2) **choices are embedded in a larger institutional and structural framework** that shapes the nature of parenthood, the access to alternatives, as well as the priority and compatibility of different options within the life course.

4.7 Summary and Conclusion

Key Findings and Outline of the Micro-Theoretical Framework

The discussion in this chapter (4) aimed to elaborate a framework that integrates central theoretical perspectives that contribute to the understanding of fertility decisions, emerging over time. The main theoretical assumption of this framework is that childbearing decisions, particularly with respect to the first-birth decision, relies on rational choice among alternatives. The transition to parenthood is commonly preceded by long-term planning and complex decision sequences. The choices behind this perhaps most momentous transition in individual life

courses are crucially affected by the two partners' internal and external opportunity structure[108].

I have sketched out a picture of human decision makers who anticipate both future conditions as well as the reactions of their social environment when starting a family. The model of man, outlined up to this point represents an enriched version of the RREEMM model (see Lindenberg 1985; Lindenberg 1986). However, I argue with Simon (1955) that in choosing between family formation and alternative courses of action, actors are far from being aware of all the consequences of different pathways. Instead, they rely on heuristics in choice processes to come to satisfactory results (see; March 1978; Kahneman & Tversky 1979). The transition to first birth is a unique choice situation within the life course, given the limited chance to learn from previous experience or past choices of a similar nature. Thus, weighing family formation against alternative life paths is a difficult endeavour – particularly because the immanent nature of the desire to have a child bars a merely instrumental calculation of costs or benefits in comparison to other life options: in many cases, having a child constitutes an "intrinsic, nonsubstitutable pleasure" (Schoen et al. 1997: 335).

Yet, family formation can be assessed theoretically as an intermediate goal in gaining social esteem and physical well-being, as assumed in a social production function approach (see Lindenberg & Frey 1993; Nauck 2005). From this point of view, parenthood competes with alternative life paths that provide similar means for self-fulfilment and social recognition. Thus, a career focus is a central competitor against parenthood in market economies since it, too, guarantees well being[109] and social approval, while the two goals compete over scarce time resources in everyday life as well as across the lifetime. This competition is further aggravated, as both labour market participation and family formation are still normatively en-

[108] With respect to the external opportunity structure, social, institutional, and cultural conditions influence the decision to start a family. Examples include the availability of care networks, normative expectations regarding parental roles, and institutional incentives and sanctions that affect the attractiveness of both parenthood and competing alternatives. The internal opportunity structure pertains to individual resources that determine attitudes towards having a child, the level of preparedness for parenthood, which includes biological and economic capabilities to start and support a family. Human and social capital mediate the costs of parenthood and the access to alternatives, while psycho-social dispositions reflect the individual's maturity, and thus their ability to take on parental responsibilities as specified by internalised norms. All these factors affect the desire to have a child, or to invest in alternative life goals, respectively (see Huinink 2001b: 4).

[109] Nevertheless, it should be noted that career focus and having a child generate different forms of well-being that are most likely non-substitutable in satisfying either economic or emotional needs. In this context, having children still remains a broadly universal desire in modern societies (see Huinink 2001a, Schoen et al. 1997).

couraged, while the former provides the economic foundations for the latter. Importantly, occupational opportunities are sensitive to delays, which often irrevocably reduce future options. Particularly, where institutional guidelines no longer provide reliable scripts, actors tend to avoid pre-commitments in order to maximise future options. This commonly results in delaying credible long-term commitments like starting a family (Lundberg & Pollak, 2007: 23).

Against this background, partners who plan to become parents are likely to bargain over arrangements for future occupational involvement and parental tasks to prevent individual burdens from hampering individual aspirations and biographical options. In this bargaining context, occupational opportunities and (economic) independence signal the extent to which each partner can influence the division of parental duties in his or her favour. Mutual trust and reciprocity signal that contracts regarding the future distribution of parental burdens will be kept. This is particularly relevant, where the woman has a strong labour market attachment, and the transition to parenthood will require her to focus – at least temporarily – exclusively on maternal tasks.

Institutional arrangements interfere in this decision-making process by enacting scripts on how to arrange a gender-specific division of labour between household and gainful employment. This is particularly important when women attempt to maintain their career focus in spite of welfare state arrangements and a cultural environment that encourage traditional gender roles (see Section 3.2). Where different institutions impose contradicting scripts on the work/family nexus, the resulting role strain hampers people's ability to combine their individual biographical aspirations with family formation, which results in a tendency to delay decisions with momentous and irreversible consequences. For a more detailed view on the implications of analysing fertility choices from a life course perspective, refer to the above summary in Section 4.6.5.

An Outlook on Empirical Operationalisation

In outlining this framework of fertility decision-making over time, I have aimed to incorporate elements of dynamic choice and biographical planning within a social (partnership-related) and institutional context, which to my mind are crucial for the understanding of family formation rationales. This theoretical framework assumes the individual desire to have children as baseline for fertility decisions. The costs and benefits that actors associate with starting a fam-

ily rank far beyond mere monetary costs but also pertain to options forgone, once the irreversible choice to have a first child is made. Developmental factors that result from previous experiences and decisions condense in the aim to have a child as well as in the evaluation of alternative courses of action. Finally, all these decisions are embedded not only in individual biographies but also in a larger institutional, structural, and cultural background that essentially mediates the realization of fertility desires and the attractiveness of alternative options.

This theoretical framework remains unpolished in several respects and would certainly profit from further refinement through various elaborations and extensions. Nevertheless, the discussed approach integrates aspects that are still underexposed in the theoretical modelling of fertility choices. In particular, this applies to the genesis of choice processes within couples over time. With respect to the empirical operationalisation of this approach, I am aware that the theoretical framework outlined is highly demanding in terms of both data and methodology. Given the state of the art in these fields, limitations in the available micro-data pose a serious problem, which will lead to a series of curtailments in putting the theoretical framework to the empirical test. The limitations on data availability and quality are most severe with respect to subjective information on beliefs and attitudes (which might reveal some hints at individual preference structures), partner information, and cross-national comparability. Nevertheless, I have aimed to develop a theoretical framework that considers the emergence of family formation rationales over time against a cross-national background, thus highlighting the role of individual developments in an institutional and cultural context. These issues will form the key elements of the following empirical analyses.

Chapter Five

Gender-Specific Effects of Unemployment on Family Formation:

A Cross-National Perspective

Abstract

This chapter investigates the impact of unemployment on the propensity to start a family. Unemployment is accompanied by bad occupational prospects and impending economic deprivation, placing the well-being of a future family at risk. I analyze unemployment at the intersection of state-dependence and the reduced opportunity costs of parenthood, distinguishing between men and women across a set of welfare states. Using micro-data from the European Community Household Panel (ECHP), I apply event history methods to analyze longitudinal samples of first-birth transitions in France, Finland, Germany, and the UK (1994-2001). The results highlight spurious negative effects of unemployment on family formation among men, which can be attributed to the lack of breadwinner capabilities in the inability to financially support a family. Women, in contrast, show positive effects of unemployment on the propensity to have a first child in all countries except France. These effects prevail even after controlling for labour market and income-related factors. The findings are pronounced in Germany and the UK where work-family conflicts are the cause of high opportunity costs of motherhood, and the gender-specific division of labour is still highly traditional. Particularly among women with a moderate and low level of education, unemployment clearly increases the likelihood to have a first child.

Keywords: family formation, fertility, unemployment, cross-national comparison.

5.1 Introduction

The aim of this chapter is to analyse the impact of unemployment on fertility behaviour at the individual level. This issue is rooted on the one hand in conflicts over the limited time available for parenthood (both time in everyday life, and time within the lifetime), and on the other, in the economic requirements for supporting a family and thus fulfilling breadwinner responsibilities. Unemployment is one manifestation of precarious employment patterns (see Kreyenfeld 2000; Kurz, Steinhage & Golsch 2001; Tölke & Diewald 2003). Moreover, it exacerbates economic deprivation, particularly in young families (see Beaujot & Liu 2002; D´Ambrosio & Grandin 2003, Finch & Bradshaw 2003, Jenkins, Schluter & Wagner 2003).

The *individual* experience of an unemployment episode bears a series of consequences, some of which hamper family formation, while some foster the transition to parenthood. Unemployment reduces the opportunity costs of a fertility transition by providing time for child-rearing, an otherwise scarce commodity when trying to combine work and family. Moreover, family formation might compensate for the loss in social status, particularly in social contexts where having children is highly valued (see generally Leibenstein 1975). In contrast, unemployment undermines the economic foundations for a future family. Long-term commitments like parenthood are at risk when the individual's future ability to financially support a family is in question. Longer spells of unemployment or absence from the labour market may furthermore devalue human capital investments and may seriously hamper the chance of returning to the labour force, thus consolidating economic dependence. Hence, a return to the labour market might – under certain conditions – be the first choice over family formation.

Theoretical considerations as well as previous empirical research dealing with the impact of precarious employment situations on fertility suggest that such factors are unlikely to affect both genders in similar ways (see Oppenheimer 1994; Kurz et al. 2001; Tölke & Diewald 2003; Golsch 2004; Kreyenfeld 2005b; Tölke 2005). Hence, these rational choice based considerations and previous research findings will be addressed in detail in the following sections. In investigating a possible connection between unemployment and family formation, the focus of analysis remains on two major research questions:

- First, do unemployed persons have a significantly different likelihood of entering parenthood than persons with continuous employment careers?

- Second, is there a gender-specific difference in the effect of unemployment on the transition to parenthood?

Institutional regulations play central mediating roles in the gender-specific rationales for family formation during times of unemployment. The economic endowments of families, the ability to combine work and family, and predominant gender role ascriptions are closely related to welfare state regulations (see DiPrete et al. 2003; Neyer 2003; see also Section 3.2). An investigation of the unemployment-related effects on the family formation process must therefore consider the role of such institutional arrangements. The methodological approach of this paper includes a cross-national comparison of four countries: Finland, France, Germany, and the United Kingdom, each representing a specific welfare state orientation. The empirical models are based on longitudinal analysis of micro-data from the European Community Household Panel (ECHP), facilitating event history methods.

5.2 Unemployment and the Transition to Parenthood – Previous Findings

Individual Unemployment

There are several studies that focus on the relation between labour market performance and family formation at the micro level. Most of these do not explicitly focus on unemployment but consider it an indicator of occupational performance. Moreover, most studies refer to specific populations on a national or sub-national level. Liefbroer and Corjin, e.g. (1999) find in an analysis of Dutch and Flemish young adults that unemployment hampers family formation among men but significantly promotes the rate of entry into parenthood for women. With a focus on the relation between education, occupational hardships, and the transition to first motherhood in Sweden between 1986 to 1997, Hoem (2000) identifies particularly low birth rates among students, but no distinct effects in cases of unemployment. Andersson (2000), however, points to findings suggesting a positive effect of unemployment on first-birth risk, at least among Swedish women between 20 and 30. In a study examining the fertility consequences of unemployment, Kravdal (2002) utilises Norwegian register data for both men and

women. According to this study, the transition rate to second and higher-order births is diminished by unemployment episodes, while in contrast a weak positive effect exists for the transition to first motherhood. Among men, his findings point to a dominant negative effect of unemployment with respect to all birth parities. The set of covariates in this study is very limited, however, and also excludes wages. In line with the above results, Vikat provides findings for Finland (2004) that display a weak correlation between unemployment and individual fertility, particularly among women younger than 30.

In the case of Germany, Kurz, Steinhage, and Golsch (2001) find the aforementioned gender-specific opposite effects, with a higher likelihood for unemployed women to start a family and a slightly lower likelihood for unemployed men. Tölke and Diewald (2003), who focus on the transition to fatherhood in the context of precarious employment, also recognize a negative impact of unemployment. Witte and Wagner (1995) also investigate the effect of employment status on the transition to fatherhood, distinguishing between transitions in East and West in post-unification Germany. Although theoretically arguing that occupational insecurities should hamper breadwinner qualities, they do not find any clear evidence in that direction. Kreyenfeld also distinguishes between East and West Germany in her analysis (2000), and among different durations of unemployment. She cites a pronounced increase of entry into motherhood beyond short-term unemployment, as well as for all women with lower levels of academic education. In another approach, which focuses on labour market related insecurities, Huinink and Kreyenfeld (2004) examine the first-birth risks of two East German cohorts. The authors point out that an immediate effect of unemployment on family formation is evident, but note that "employment uncertainties do not generally contribute to a postponement of fertility" (Huinink & Kreyenfeld 2004: 28).

The majority of the presented studies focuses on female fertility transitions from unemployment (except for Tölke & Diewald 2003, e.g.), while only the studies by Kreyenfeld for Germany (2001) and by Kravdal for Norway (2002) control for any effects of unemployment duration. Moreover, all of the studies mentioned focus on a country specific context. The only investigation that makes use of cross-national comparative data for the analysis of first-birth transitions for both men and women is provided by Golsch (2004). Using ECHP data from Germany, the UK and Spain for her analysis, she identifies significant effects of unemployment only among Spanish men, for whom the impact is distinctively negative. The current

project aims to expand this view to explore the effects of unemployment on the transition to parenthood among both men and women in a cross-national comparison of France, Finland, Germany and the UK. By doing so, I will also control for the impact of several partner characteristics and for the impact of unemployment duration.

Aggregate Unemployment

An additional group of studies focuses on the impact of unemployment rate on individual fertility decisions. Generally, high unemployment is assumed to exert a pronounced negative effect on fertility. Adsera (2005) stresses this finding for a set of European countries based on ECHP data, and Klein and colleagues (1996) provide similar findings for East Germany[110]. Kravdal (2002), for Norway also stresses the depressive effect of high unemployment rates on fertility (considering only aggregate fertility, however). The assumed mechanism at work is that high unemployment signals bleak labour market prospects and the resulting occupational insecurities offer an unpromising outlook for starting a family. Thus, couples tend to focus on occupational attainment in order to contain these risks, which fosters a deferral of childbearing decisions (see Kohler et al. 2002: 659; Vikat 2002: 174; Aaberge et al. 2005: 132). This reasoning is in line with a research tradition initiated by Easterlin (1962; 1966) and Butz and Ward (1979), which assumes that fertility behaviour is oriented on anticipation of (macro-) economic conditions.

However, it has already been pointed out that such macro-level correlates are no reliable indicators when attempting to unravel the underlying mechanisms at work. Two topics are of special relevance in this context: 1) It remains unclear through which mechanisms such objective indicators as unpromising economic prospects translate into individual perceptions, and 2) Once these perceptions are established, it is unclear how individual perceptions of economic uncertainty affect fertility behaviour. The following investigation will focus primarily on micro-level effects of individual unemployment and thus address the second of these questions with respect to tangible experiences of economic insecurity and their impact on fertility behaviour. Through a cross-national comparison, this section will attempt to clarify the im-

[110] The study presents some evidence that individual unemployment interacts with a high unemployment rate. In this context, the authors stress that a high unemployment rate tended to foster the transition to motherhood in East Germany shortly after German reunification (see Klein et al. 1996: 75).

pact of different welfare systems and labour market conditions on *individual* fertility decisions.

5.3 Fertility Decisions under Unemployment – Theoretical Considerations

This section will rely largely on the micro-theoretical framework outlined in Chapter 4 of this study. Moreover, it will consider how unemployment effects the individual's transition to first birth in the context of the structural, institutional, and cultural background outlined in Chapter 2, and particularly in Chapter 3. The current section (5.3) will recapitulate the central theoretical issues and apply them to an investigation of how individual experience of unemployment alters family formation rationales. In this context, the negative consequences that attend job loss – the loss of earnings, a decline in social status, a depreciation of human capital investments and insecure future prospects – are all likely to exert a specific (not necessarily univocal) impact on the choice to start a family.

Work and Family as Competing Domains in the Life Course – Initial Considerations

This section begins with the assumption that the desire to have children is a common and widespread life-goal in modern societies (see Huinink 2001b: 3). Family formation, like participation in gainful employment and investment in a career, provides social approval and physical well-being, through acquiring comfort and stimulation (through the joy of watching a child grow up, for example, or by earning the monetary resources for consumption). From the perspective of social production functions, family formation and gainful employment both represent competing options for attaining these universal life-goals (see Lindenberg 1986; 1991). Still, the desire to have a child is often based on immanent values, so pursuing alternative goals can only provide a limited substitute for the satisfaction of these desires (see Schoen et al. 1997: 335). In any case, starting a family requires financial resources and economic security (see Oppenheimer 1994).

The above picture addresses two central points: First, becoming a parent and investing in a career are choices that compete for a limited time budget. Second, starting a family generally

relies on a sound and stable economic basis, which is provided by gainful employment. A widespread response to these constraints is to either combine work and parenthood by reducing individual expenditure in both domains (and by activating social support networks where possible). The alternate is to arrange labour market engagement and parenthood sequentially within the course of an individual biography, that is, to postpone the first-birth transition (see Dornseiff & Sackmann 2003).

When unemployment enters into the situation as an unexpected labour market event,[111] it fundamentally alters the context outlined above. The economic support of a future family is placed on uncertain ground; the opportunity costs of parenthood are drastically diminished, while human capital investment tends to deteriorate with duration of labour market absence. At the same time, having a child presents an alternative means of gaining social approval. The question, which of these mechanisms eventually dominate, and lead either to a hastening or a postponement of parenthood under unemployment, must be answered with a close focus on the societal context of social structures and institutional arrangements (see DiPrete & McManus 2000). Most of the factors that effect the relation between family formation and unemployment differ in their impact on men and women as well as across countries. The family formation rationales related to these contexts will be discussed theoretically in the following section.

A Gender Perspective on Unemployment and Family Formation

Interpreting the wages of female workers as an indicator of the value of women's time, unemployment or bleak labour market prospects reduce the price of time, thus reducing the opportunity costs of parenthood (see Leibenstein 1975). A specialisation on household production of commodities in this context would be a reasonable response to unemployment (see Becker 1993). However, this is highly dependent on predominant models of gender division of labour in a society, which range from egalitarian to traditional roles. **Neoclassical models,** which commonly assume *traditional gender roles*, envisage a complementary division of occupational and domestic tasks, divided along gender lines. From this perspective, **female unem-**

[111] In fact, some actors may deliberately plan their labour market exit prior to family formation. However, the nature of most welfare state transfers, in particular, reinstatement rights after parental leave and the fact that unemployment support only partially replaces former income renders this an unlikely choice under most welfare state arrangements.

ployment should speed up family formation, while male unemployment should delay family formation (see Zimmermann & DeNew 1990). Friedman, Hechter, and Kanazawa (1994) similarly argue that – assuming traditional gender roles – women in a discouraging employment situation are more likely to opt for motherhood, taking into account not only their current situation, but also the unpromising labour market prospects.

From a theoretical perspective that also takes into account *egalitarian gender* roles, female unemployment would still reduce the opportunity costs of parenthood in contexts where *both* partners are integrated into the labour market. Even in societies that tend towards high levels of gender egalitarianism, female engagement in childcare exceeds male contributions (see Section 3.2). If the time-intensive transition to parenthood is placed within a period of unemployment, forgone earnings are still minimized and time conflicts are cushioned for couples with egalitarian gender roles. However, it should be noted that where parental burdens are more equally distributed between men and woman, female opportunity costs are lower, and hence the incentive to further reduce these costs by placing the transition to parenthood within an unemployment episode should be less pronounced.

In the case of **male unemployment**, there is a limit to how much family formation can be combined with the father taking over the bulk of parental responsibilities, since some of the maternal burdens associated with having a child like childbearing, giving birth and nursing, are unalienable. Indeed, the transition to parenthood always requires that the mother take at least a temporary absence from the labour market. Welfare state income replacements and reinstatement rights after a maternal leave offer *limited* compensation for this absence (see Section 5.4.3). However, in cases where the man is unemployed and the woman is the sole income earner, *her* temporary exit from the labour market most likely conflicts with the need to maintain the economic stability and autonomy of the couple. Evidence, particularly from the US, indicates that childbirth-related absences from the labour market can be fairly short[112] and a quick return of the female to her job can be compensated for if the man adopts a larger share of the parental obligations (those that are distributable). This reversal of traditional roles, however, involves wide deviations from common gender norms and is perhaps most likely in institutional contexts where maternity protection is underdeveloped anyway, as in the liberal

welfare state. Summarizing the above, **starting a family with a female wage earner and a male carer poses an unlikely constellation**.

The conclusion of this initial frame of reference suggests that there are **gender-specific effects of unemployment**. Thus, unemployment can be seen as an exogenous effect that, in the context of a pending transition to parenthood, has different implications for family formation decisions when either the man or the woman becomes unemployed. For both partners, individual unemployment directly reduces available household income. Moreover, for both men and women unemployment indirectly reduces the obtainable market income by diminishing human capital with the increasing duration of the unemployment spell. What applies particularly in case of ***female unemployment*** **is a reduction in the cost of time** required for childcare (whereas the original cost of parenthood depends on the availability of public childcare). If a couple displays more egalitarian gender role attitudes, resulting in male engagement in childcare, the reduced price of time would also apply to male unemployment. As shown above, however, parenthood in case of *male unemployment* would require that the female temporarily reduces her activity in the labour market, and so this appears an unlikely case where the male earner is already without a job. Furthermore, judging from the limited paternal engagement with childrearing in virtually all Western societies (see Fuwa 2004), women can anticipate that they would still have to expend significant effort in childcare, making family formation during male unemployment an even more unlikely scenario. In this sense, **male unemployment** is more likely to function primarily as a signal of **reduced breadwinner capabilities**, thus decreasing the likelihood of family formation (see Oppenheimer 1994: 322).

Unemployment and Biographical Uncertainties

With respect to family formation, unemployment directly hampers the creation of a solid economic basis, but it also increases future risks by depreciating human capital, entailing permanent losses in earnings (see Gangl 2006) and by nourishing doubts about the future capability to support a family. Unless unemployment is willingly entered into with a new occupational perspective up one's sleeve, becoming **unemployed signals uncertain future prospects**, putting family formation on a precarious basis. Issues that contribute to this uncertainty about the

[112] However, it can be argued that the prevalent quick job return postpartum is rather due to an underdeveloped maternity protection and economic needs in liberal welfare states than to close labour market attachment.

future include: the possibility of having to move to take a new job, uncertainty about whether the new occupation will have adequate or the same occupational status as the previous position, whether wage expectations will be met or whether some loss in income must be accepted. All these issues and, last but not least, not knowing *when* an appropriate job will become available, increase uncertainty about the future. Such uncertainties are likely to hamper family formation plans, where they undermine the stability and economic foundation of a future family. Importantly, most of these contexts and prospects associated with **unemployment related uncertainties tend to worsen with unemployment duration.**[113] Moreover, these uncertainties are also mediated by educational attainment; higher education is associated with better chances to regain a job quickly, but also a higher threat of depreciated skill endowments.

Furthermore, the **institutional setting** also **mediates the perception of risks during unemployment**. On one hand, different welfare states might provide different levels of protection from unemployment. On the other, this same social protection might affect attitudes toward risk, whereby a higher level of protection perhaps induces a more rigid assessment of which contexts are deemed sufficiently reliable for family formation. Employer-firm relations in coordinated market economies, characterized by high levels of trust, indicate reliability and long-term relations, what might further nurture the avoidance of uncertainty. That is, in societies that provide a high level of protection from unemployment by minimizing risk incidence,[114] the actual experience of unemployment might present a much more severe experience of insecurity than is the case in societies where labour market entries and exits are common events, as in liberal market economies. In a society that relies on a high level of social protection and that aims to minimize risk, an internalised uncertainty avoidance might make family formation in a precarious occupational context an unpromising biographical option. Yet, it should be noted that a strong economic position or the thorough labour market integration of the other partner could contain the negative impact of unemployment related uncertainty.

---

[113] This is an even greater issue where institutional unemployment support is reduced after a certain time in most welfare states (see Section 5.4.3).

[114] For instance, by enacting legal protection of employees, and by encouraging long-term employee-firm relations (see Hall & Soskice 2001; DiPrete 2002).

Unemployment and the Depreciation of Human Capital

Becoming unemployed represents a more pronounced change in status for people with higher levels of education, for whom individual aspirations and comparison with reference groups will likely render unemployment a more drastic experience than for low skilled professionals. A higher level of education and vocational skills translate into a higher earning capacity and increased career options. Moreover, **human capital endowments tend to deteriorate with duration of labour market absence** (see Mincer & Polachek 1974; Mincer & Ofek 1982). "The longer a woman would be out of the labour force, the greater a loss she would incur in terms of skill degradation and lost opportunities (for promoting and training)..." (Gauthier & Hatzius 1997: 296). In the case of highly skilled unemployed *women*, reintegration into the labour market is also favourable in order to avoid the consolidation of the homemaker role and the associated risk of economic dependence (see Ott 1995). Thus, for persons who have made extensive skill investments, and for higher educated women in particular, it is rational to postpone family formation and instead promote a labour market reintegration (see Brewster & Rindfuss 2000: 281; Tölke 2004: 25).

However, the costs of deteriorating human capital when facing unemployment (and thus the expected decline in both future earnings and career options) are opposed to significantly decreased opportunity costs of starting a family. Among women with a higher income capacity, this decline in opportunity costs is particularly pronounced (see Lundberg & Pollak 2007: 18). An important question in this context is whether the decreased opportunity costs of childbirth during unemployment outmatch the urge to avoid a depreciation of human capital and thus to re-enter the labour market. Two issues are critical in this context:

1) The actors' assessment of the costs of remaining unemployed and the costs of parenthood are mediated by institutional contexts (see DiPrete & McManus 2000: 344f.). This is the case, for example, where transfers partially compensate for income loss in case of unemployment or where the infrastructure for childcare permits the time required for childcare to be reduced, thus lowering the opportunity costs of parenthood.

2) The duration of the unemployment episode is likely to influence whether the individuals favour family formation or labour market re-entry. While actors will try to avoid an ongoing deterioration of skill endowments, the confidence that one can quickly regain a job is likely to decrease over time.

An analytic consideration of how ***unemployment duration*** effects the likelihood to opt for having a child is provided by Happel, Hill and Low (1984). According to their theoretical model, decisions in favour of birth are made in cases where the negative impact of the duration of the woman's unemployment offsets the amount of her accumulated human capital. However, the anticipated depreciation of the human capital is further mediated by the assessment of the current labour market situation, the perceived chances of regaining a job quickly, and how current job options compare to those expected after a childbirth-related leave. While unemployment rates are an indication of occupational prospects (see Aaberge et al. 2005: 132), more generally the type of market coordination affects the permeability of labour markets, thus influencing the chances to re-enter the labour market (see Hall & Soskice 2001). The perception of bleak job prospects can speed up the transition to motherhood. This might be the case if attempts to regain a job remain unsuccessful over a long period of time, leading to a sense of resignation, or if a labour market crisis and recession indicate that ew employment opportunities are rare. For men, however, one would expect the likelihood of starting a family to be generally reduced from the perspective of depreciating human capital endowments, which tends to signal a decline in potential income, and thus in breadwinner capabilities.

In summary, the **depreciation of human capital exerts a negative impact on the transition to parenthood for both men and women**. However, the high opportunity costs of parenthood may outmatch the depreciation, particularly among women with a lower skill set. Among men, on the other hand, with their generally lower engagement in childcare, skill loss primarily signals a decline in the ability to provide a sustaining source of income. Among women with a higher level of education, the institutionally mediated opportunity costs of parenthood and the duration of unemployment (associated with potential discouragement and decreased chances of quickly regaining a job) are likely to be weighed against each other.

Family Formation from Unemployment and Bargaining Position

Unemployment – particularly if it is of longer duration – does not only depreciate human capital investments. It also shifts the bargaining power within couples to the detriment of the one who is unemployed, since bargaining power relies on labour market status and educational achievements (see Ott 1995; Beblo 2001: 23). As unemployment tends to weaken the individual's bargaining position, two main conclusions can be established. 1) The partner with

the superior income position (usually the one who is still employed, assuming both partners were previously working) can better voice his individual preferences, particularly his childbearing preferences (see generally Bielby & Bielby 1992: 1244). Furthermore, female unemployment in particular will likely result in a more traditional division of labour within the couple, with the woman assuming a higher proportion of household chores. That is, the division of labour already tends towards what is likely going to be the status quo throughout parenthood. 2) In order to avoid economic dependence and to improve his bargaining position, the unemployed partner will likely try to regain a job. This dynamic is mediated by the welfare state, where a higher level of unemployment insurance partially protects from dependency. Yet, the extent of this mediation depends on the level and duration of unemployment benefit payments.

When making the decision to step out of the labour market, the increase in household utility (caused by specialisation and by the realisation of childbearing desires) stands in contrast to the depreciation of individual human capital and a reduction of future career opportunities. This becomes especially virulent if the unemployed person considers the possibility of a future separation. Hence, a long-term commitment to the homemaker role that hampers chances of reintegration into the labour market may be risky business, particularly in a societal context where the stability of relationships is becoming ever more fragile (see Ott 1998: 73).

To sum up, when focusing on the role of the homemaker it is evident that the reduction of opportunity costs of parenthood caused by the reduced price of time in case of unemployment stands opposed to the perceived risk of economic dependence and the deterioration of one's own bargaining position in a couple. How these factors are evaluated depends on the individual's human capital investments, on the anticipated employment prospects (which indicate chances of recovering the individual bargaining position), and on the degree of mutual trust (indicating the likelihood that the significant other will exploit his or her superior bargaining position).

Institutional Mediation of Fertility Behaviour under Unemployment

During a period of unemployment, the evaluation of whether to start a family is mediated by the general labour market prospects as well as by the institutional context. **Institutional regulations affect the opportunity costs of parenthood,** the **options for getting back into employment,** and **unemployment benefits**. A high degree of labour market closure, common in

coordinated market economies like Germany, tends to increase the threat of long-term unemployment, and, therefore, of economic dependence. In contrast, liberal market economies provide limited protections against unemployment-related hardships, due to the generally low-level of unemployment benefit payments of a short duration. With respect to parenthood, these types of states also provide limited support for child-related costs, due to low child allowances combined with an underdeveloped childcare infrastructure. In several conservative welfare states, a low supply of childcare facilities is common, particularly in places where norms of maternal care are pronounced. This translates into high opportunity costs of parenthood in such countries, which provide a strong incentive to start a family during periods of unemployment. Additionally, in many welfare states, unemployment benefits tend to increase with the transition to parenthood (see Section 5.4.3) which mitigates some of the adverse effects of unemployment and provides a minor additional incentive to start a family while unemployed. In contrast, unemployment support is significantly decreased after prolonged periods of unemployment. Coordinated market economies provide a lasting support, with unemployment insurance benefits aspiring to near income replacement levels. In contrast, in liberal states, the generally low level of support is quickly reduced to a minimum level (see Section 5.4.3). Particularly in a situation where job prospects are bleak, a generous monetary support for parents alleviates the financial setback of unemployment, and may provide an incentive that tips the scales in favour of family formation.

Moreover, where the interplay of culture and institutional arrangements leads to an extended childbirth-related job-absence, the anticipated opportunity costs of parenthood are higher. Parents-to-be in southern European countries and in Germany in particular usually anticipate this extended duration of occupational absence. In places where strict norms of maternal care are combined with an underdeveloped childcare infrastructure, extensive maternity protection and reinstatement rights (the latter applies to Germany only) result in long periods of absence from the labour market. These extensive labour market exits due to motherhood are closely related to the ascription of traditional gender roles, reproduced in institutional settings. This signals extensive incompatibilities of work and family formation, which are related to the high opportunity costs of parenthood (see Aaberge et al. 2005: 137).

Hence, if a couple plans to have a child, placing the labour market exit due to parenthood within the unemployment episode could serve as a strategy to minimize the duration of labour

market absence, particularly in countries where the institutional setting induces an extensive childbirth-related leave of absence. Opting for such a strategy depends on whether individuals conclude that a return to the labour market is easier from unemployment or from a child-related labour market absence. Reinstatement rights that are part of leave policies, such as those in place in Germany or in Finland, certainly provide a strong incentive to start a family while still employed, as the depreciation in skill endowments does not interfere with job return because of the legal protections such a policy provides. This in turn decreases the likelihood to place the transition to parenthood in a period of unemployment, since a quick return to the labour market in this context is ruled out in favour of a longer leave period, and particularly since potential employers are likely to be reluctant to hire during pregnancy, given the extensive maternity protections (see Soskice 2005). Hence, this combination of unemployment and family formation signals adverse prospects for human capital development and occupational opportunities if the woman wants to the return to the labour market in the future.

More generally, where job protection regulations are extensive – which is the case in many coordinated market economies – firms are more reluctant to hire staff, as employment is associated with long-term commitments and legal responsibilities. This increases the divide between labour market insiders and outsiders. Thus, the risk of long-term unemployment in coordinated economies like Germany is higher than in liberal market states like the UK or the US with a higher labour turnover (see Hall & Soskice 2001). In this context, chances of re-entering employment worsen over time in coordinated market economies, providing a strong incentive to quickly regain a job. Longer unemployment episodes are likely to foster discouragement in job search, making family formation a more promising alternative. In contrast, the negative impact of unemployment in liberal market economies appears mainly in the form of financial risks due to limited unemployment support, while the risk of long-term unemployment is generally contained by a higher labour turnover rate. In coordinated economies, the financial risks of unemployment are cushioned by generous levels of support. The conservative welfare state additionally strengthens support for families to cushion them from such life course risks. However, in case of female unemployment, this institutional context commonly fosters economic dependence on a breadwinner. In particular, women with higher levels of education will try to avoid such a constellation, thus aiming to regain a job rather than starting a family, which would consolidate a traditional division of labour.

Gender Roles and Social Norms in the Context of Unemployment and Parenthood

To sum up the above discussion, institutional regulations mediate the relation between unemployment and family formation through direct monetary support and by affecting the assessment of labour market risks and opportunities, as well as the assessment of the prospects for supporting a family. Furthermore, where institutional regulations strengthen families as support networks, encouraging social support in kinship groups (for example with respect to childcare), these regulations also reinforce norms of a traditional division of labour in the family (see Section 3.2). Moreover, in societies where traditional gender roles prevail, female unemployment has a higher potential of shifting the division of labour towards more traditional arrangements (see Klein et al. 1996:70 for reference to Germany). In societies where female labour market engagement has becomes increasingly common, the social stigma of joblessness is extended to *female* unemployment (see Hakim 2003: 369). While this stigma presents a strong source of social disapproval in societies, oriented toward the labour market, a focus on parenthood can raise social esteem and self-perception (see Morgan 2003: 592; Tölke & Diewald 2003: 43ff.). Thus, the loss of status due to unemployment might be *compensated* for by shifting the activity to the family domain by having a child (see Murphy 1989: 17). Where such a mechanism of compensation is in effect, it is probably more pronounced among women with low levels of education. On average, these women are younger when having their first child, and extensive birth postponemnent and childlessness most likely signals a stronger deviation from reference groups, whereas starting a family generates social approval through its compliance with group patterns (see generally Leibenstein 1975).[115]

Hypotheses

As outlined above, the way that actors evaluate family formation during period of unemployment – whether it presents a promising option or not – depends on a series of factors that most likely differ in their impact as well as in the direction of effect. Prolonged unemployment, on one hand, may be a signal of bleak prospects for regaining a job. In contrast, longer periods of unemployment may also signal that the economic basis for supporting a family has been seriously undermined. Importantly, the effect of unemployment is mediated by a series of en-

[115] Alternatively, Friedman, Hechter & Kanazawa (1994: 383) argue that family formation might compensate occupational insecurities by providing clearly predictable paths in the private domain, thus reducing uncertainty.

dogenous and exogenous factors that alter the opportunity structure, making family formation either a promising or inadvisable option. These factors include the individual's repertoire of skill endowments and income capacity, characteristics of the partner's labour market prospects and income that might compensate for the unemployment of the significant other (see Drobnic et al. 1999: 144). Moreover, mutual trust and extensive reciprocity in one's relationship is an indication of reliable backing and support. Additionally, social norms are key factors in the regulation of occupational and family roles. The extent to which norms reprove economic inactivity with a decline in social esteem, or the extent to which a focus on parental life might compensate for a loss in job status crucially depends on the gender role expectations in a society. Finally, welfare state regulations are essential factors that foster or discourage starting a family during a period of unemployment, not only through the extent of monetary support but also in the general level of protection from risks, and eventually, by the reproduction of either egalitarian or traditional gender roles.

The following hypotheses aim to present a testable basis for the analysis of differential institutional and cultural backgrounds and their impact on family formation rationales in the context of unemployment.

H1: Opportunity cost hypothesis: Unemployment lowers the opportunity costs of family formation. Childless persons therefore show a higher probability of performing the transition to parenthood during periods of unemployment, independent of other factors, especially gender.

H2: Breadwinner / Homemaker hypothesis: Unemployment increases the probability of first birth transitions for women but not for men. This applies in particular to contexts where traditional gender roles are predominant, and where women are disadvantaged in the labour market. As these contexts consolidate traditional divisions of labour, men – taking the role as the breadwinner – seek a quick reintegration into the labour market. For them, adverse occupational prospects and a lack of economic backing represent diminished breadwinner qualities, thus reducing the propensity to start a family.

H3: Compensation Hypothesis: The loss in social status due to unemployment can be compensated for by a focus on the private domain. Starting a family may thus serve as an alternative means of gaining social esteem. This compensation functions for both men and women. However, in egalitarian societies, where male contributions to the private

domain are encouraged, the compensation effect for men should be stronger than in countries where traditional gender roles are reproduced. In contrast, for women in traditional societies, the focus on the homemaker role provides a better opportunity to compensate for social disapproval due to economic inactivity than in egalitarian societies.

H4: Human capital investment hypothesis: The effect of unemployment is mediated by levels of *individual* educational and vocational attainment. Higher educated persons pursue a quick reintegration into the labour market to avoid a depreciation of their human capital investments – regardless of gender. They can be expected to perform the transition to parenthood in a situation of sound economic perspectives, which support their family planning. Persons with lower educational attainment face only a limited depreciation human capital in case of unemployment. For them, the reduction in opportunity costs of parenthood is critical, resulting in an increased affinity for family formation.

H5: Specialization hypothesis: The effect of unemployment is mediated by the relation of educational and vocational attainment between the partners. Given an equal[116] or lower level of educational attainment on behalf of the woman relative to her partner, female unemployment induces a traditional division of labour and a higher tendency to opt for parenthood. The affinity for family formation in the case of male unemployment will be diminished under these educational constellations. Male unemployment will only induce a greater likelihood of a fertility decision if the educational attainment of the woman clearly exceeds that of the man, thus reversing traditional gender roles.

H6: Auxiliary hypothesis of duration effects: In extension to hypotheses 3, 4 & 5, the likelihood of starting a family increases for women with the duration of unemployment. This is founded on the assumption of growing social disapproval due to economic inactivity, and on the assumption that prospects for swift labour market re-entry decline over time, eventually leading to discouragement in job search.

[116] Even with equal skill endowments, the woman is still at a disadvantage due to persistently lower obtainable market income for female workers compared to males (see Blau & Kahn 2000; Mahy et al. 2006).

5.4 Structural and Institutional Backgrounds in Finland, France, Germany, and the United Kingdom

The choice to start a family when facing unemployment is framed by institutional orientations, labour market structure, predominant norms of occupational participation, and parental roles. Moreover, welfare state support mediates the costs of parenthood and provides protection in case of unemployment. That is, in protecting from risks and hardships, the welfare state decisively alters family formation rationales. Policy regulations directly effect the opportunity costs of parenthood, while the general level of security provided by welfare state protections very likely influences rationales to place the transition to parenthood in the precarious context of unemployment. In front of this background, cross-national variation in unemployment support and family related policies are likely produce different outcomes in fostering or hindering birth decisions under unemployment.

By comparing these contextual factors in a cross-national perspective, I aim to establish the generality of possible findings and to highlight the impact of specific institutional and cultural backgrounds. As Melvin L. Kohn puts it: "...cross-national research is valuable, even indispensable [...] In no other way can we be certain that what we believe to be social-structural regularities are not merely particularities, the product of some limited set of historical or cultural or political circumstances" (Kohn 1987: 77).

The set of countries that will be included in the cross-national comparison include Finland, France, Germany, and the UK. The following outline will review the key issues set forth in Chapter 3, with a special focus on these countries (for a broader overview refer to Chapter 3). The four countries show profound variations in fertility levels and labour market structure. Yet, what makes comparing these countries a particularly promising endeavour is that they display distinct differences in institutional orientation. The underlying assumption is that these orientations have a concrete effect on fertility rationales, particularly in the context of unemployment. The following overview of institutional arrangements in the selected countries will consider the general institutional orientation, labour market structure, and will delineate aspects of the social support systems with regard to employment, unemployment and family benefits, especially parental leave regulations.

5.4.1 Institutional Orientations

The UK is a proponent of the liberal welfare state, whereas Finland serves as an example of the Scandinavian social-democratic welfare state. France and Germany represent the continental conservative welfare state (see Esping-Andersen 1999). Social protection is profound in Finland. This pertains to a wide array of life course risks that are covered, generous transfers, a broad formulation of eligibility rules and pre-emptive support. The UK represents the opposite pole, where risks are largely mediated by the market, and where eligibility for public support is limited, means tested, and tends to cover only the most adverse hardships. In contrast, in both France and Germany, levels of support are extensive and cover a broad array of risks. However, in many contexts, eligibility is linked to labour market status (commodification). Moreover, the high level of market coordination tends to widen the chasm between a high level of protection for the working population and a limited protection for jobless persons. Firms are encouraged to invest in employee skills and training as well as in long-term relations, while laying-off staff is made difficult by high legal barriers. As a result, there is a strong division between labour market insiders and outsiders, with long-term unemployment being one of the most severe life course risks. In contrast, in the liberal market economy of the UK, labour market exits and re-entries are much more common. Firms as well as employees focus more on short-term income maximisation than on long term relations (see Hall & Soskice 2001; Diewald & Sill 2004). The important conclusion from this is that in the UK, though unemployment protection is minimal, the threat, emanating from this precarious situation is perhaps much lower than it is in Germany, where unemployment embodies the threat of long-term economic dependence and partial exclusion from social life. Table 12 on p.54, Table 13 on p.59, & Table 14 on p.66 provide an overview of institutional orientations.

While Germany offers a paradigm of both the conservative welfare state and of a coordinated market economy, France, on the contrary, represents a variation on this pattern in vital aspects (see Soskice 2005: 177; Mayer 2005: 35). While the conservative welfare state fosters family support and thus encourages traditional gender roles, France, in its laicist tradition aims to diminish the influence of families on child socialization by fostering public care, particularly day-care, and a higher coverage of childcare institutions (see Veil 2005; see also Section 3.4). Women are encouraged to participate in employment and are widely relieved from traditional carer duties, which are partially provided by the state. Moreover, many welfare

transfers in France are directed towards the family unit, while in Germany several benefits implicitly encourage traditional institutions like marriages and single-earner families. In contrast, most support in Finland and the UK is individual centred, which alleviates economic dependence on a breadwinner and nurtures more egalitarian gender roles than in the conservative states. In many of the outlined contexts, the GDR, that is East Germany before 1990, rather resembled Finland with respect to the encouragement of egalitarian roles and female labour force participation. Parallels can also be found to the French model of childcare support and population policy. In fact, many of these institutional regulations still echo in the different gender relation still prevalent in the East of Germany (see Trappe 1995; Sackmann 2000). The key conclusion from the outlined picture is that these institutional contexts crucially shape gender role beliefs and thus enact either egalitarian gender roles as in Finland or traditional roles as in Germany.

Shifting the focus to the UK, the elaborate public childcare system in France finds its counterpart in British preschool education and the high prevalence of boarding schools (see Dienel 2003). Nevertheless, family affairs in the UK still show an extensive traditionalism, and this is despite the fact that women are strongly integrated into the labour market of this liberal economy and although individual-centred benefits support egalitarian gender roles. However, key elements that foster traditionally segregated gender roles are the low level of public childcare provision (most extra-familial childcare options are private and thus costly), as well as an underdeveloped maternity protection and support, and restrictive employment reinstatement rights (see Lewis 1992). In consequence, this renders the UK a strong male-breadwinner state, and most likely fosters the transition to motherhood during unemployment, due to reduced opportunity costs.

The aim in Finland is to reduce the pressure on parents by providing an elaborate care system that offers a wider variety of life course options by encouraging the combination of work and parenthood. Germany, in contrast, stands out in the sample by implicitly showing the highest demands on maternal roles. Close individual care and personal sacrifice in relation to motherhood are dominant norms in Germany, whereas norms of *paternal* care are widely absent and are only slowly starting to diffuse. This is also the consequence of the reproduction of traditional familial roles, enacted by ostensibly generous maternal leave regulations that – in combination with a low supply of public childcare – encourage female part-time employ-

ment or a general retreat from the labour force after childbirth (Trzcinski & Holst 2003). Additionally, regulations like the so-called "Ehegattensplitting", a specific taxation system for spouses, encourage a breadwinner / homemaker model (see Wrohlich & Dell 2005). Particularly for highly educated women with a strong labour market attachment, parenthood thus signals a high incompatibility with market roles, though maternal support appears to be generous at a first glance at German social policies.

Given the contexts of institutional orientations presented here, and their demands on parental roles, an unemployment episode that lowers opportunity costs is likely to show a positive effect, particularly in countries with high parental role demands and a high potential for role conflicts in the work-family nexus, as scarcity of time is a major issue. Thus, opposing gender-specific effects of unemployment on family formation for men and women should be expected, especially in Germany, where a traditional division of labour is still widely in place. In contrast, the unemployment effects across gender in Finland and France are probably less pronounced, as norms of maternal care are less strict, while the availability and *acceptance* of public care is much more common than in Germany.

5.4.2 A Glance at National Labour Markets & Unemployment[117]

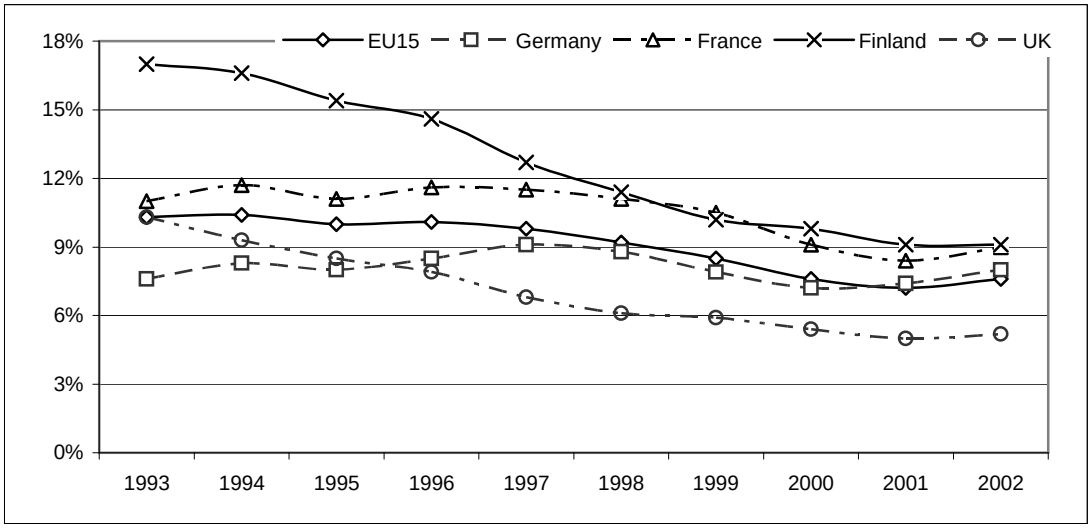
Labour market structure in the selected countries shows several particularities, which are important to a closer understanding of how the experience of unemployment and the associated uncertainty in occupational prospects affects family formation choices. Key issues in this context will be outlined in the following (for a broader overview, see Section 2.2.2).

Female labour force participation is high, particularly in Finland (69.8%) and the UK (67.9%). In contrast, female participation rates in Germany (61.5%) and France (60.2%) are slightly lower. However, a high share of women in Germany and the UK – between one-third and two-fifths of employed women – only work *part-time*[118] (for all data refer to OECD Employment and Labour Statistics 2007b). A detailed overview of labour force participation is provided in Table 6 & 7 in Section 2.2.2 (see also Figure 18, in the Appendix 5.8).

[117] Note that this outline of labour market conditions focuses on the settings that were dominant during the time for which the empirical analysis will be conducted, that is 1994 to 2001.

Unemployment rates in the observed countries displayed a clear decline between the early 1990s and 2001. The only exception to this rule is Germany, where the low to moderate overall unemployment rate between 1993 and 2001 remained widely stagnant at around 8%, with a peak of about 9% in 1997. Nevertheless, in the wake of labour-market deregulation and increasing global competition, labour market insecurities and precarious employment in Germany increased, particularly during the second half of the 1990s (see DiPrete 2002; Mills & Blossfeld 2003). France, during the 1990s showed an increase in flexible work arrangements as well. This, however, was not an outcome of labour market deregulation, and France's institutional response to macroeconomic global change managed to contain income inequality at an historically low level (see DiPrete, Goux, Maurin & Quesnel-Vallee 2006).

Figure 13: Unemployment in Finland, France Germany, and the UK 1993 – 2002



Source: OECD Employment and Labour Statistics 2007b. SourceOECD online-database.

Finland, in contrast, in the early 1990s faced its deepest recession of the last century, inducing a labour market crisis with exceptionally high unemployment rates. Among other factors, this crisis was triggered by the collapse of the socialist markets, trade cutbacks, and crisis in the financial markets. Unemployment rates rose massively (to a high of about 18% in 1994) with one-third of all unemployed persons being long-term unemployed[119]. In 1993, the youth-

[118] In 1993, female part-time employment in the UK lay at 44% while female part-time employment in Germany was at 32% (see OECD Employment Outlook 2007; see also Table 7, p. 38).

[119] Long-term unemployment relates to those who are unemployed for one year or longer according to ILO standards.

unemployment rate (below age 25) lay at 33%. It was among the highest in the EU, and rates recovered only slowly from this all-time high. With the labour market crisis, the majority of newly initiated work contracts were fixed term, while only 28% of all new contracts were unlimited. A high proportion of public employment additionally hampered the ability of state-intervention, and the Finnish labour market recovered only slowly from this shock. With unemployment rates at around 9%, Finland still ranked well above the other three countries in 2001 (see European Parliament 1996; OECD 1996).

In contrast, Great Britain showed a flourishing economic development during the 1990s with unemployment rates below 5% in 2001. These rates were the lowest in the quartet. This has been related to deregulation and the prevalence of flexible working arrangements in the British labour market (see Wells 2001). Yet, a side effect of this deregulation is a high rate of flows into and out of employment compared to highly regulated and unionised countries like Germany or Finland (see Rubery et al. 1998: 112ff.) Despite the high labour market turnover in the UK, the risk of long-term unemployment is much lower than in coordinated market economies like Germany for example, where long-term unemployment presents one of the biggest threats associated with precarious employment (see Hall & Soskice 2001; Mayer 2004). At 28% of all unemployed persons, the incidence of long-term unemployment in the UK in 2000 was lower than the rest of the group (Finland: 29%), particularly in comparison to France (42,5%) and Germany (51,5%; see OECD 2005).

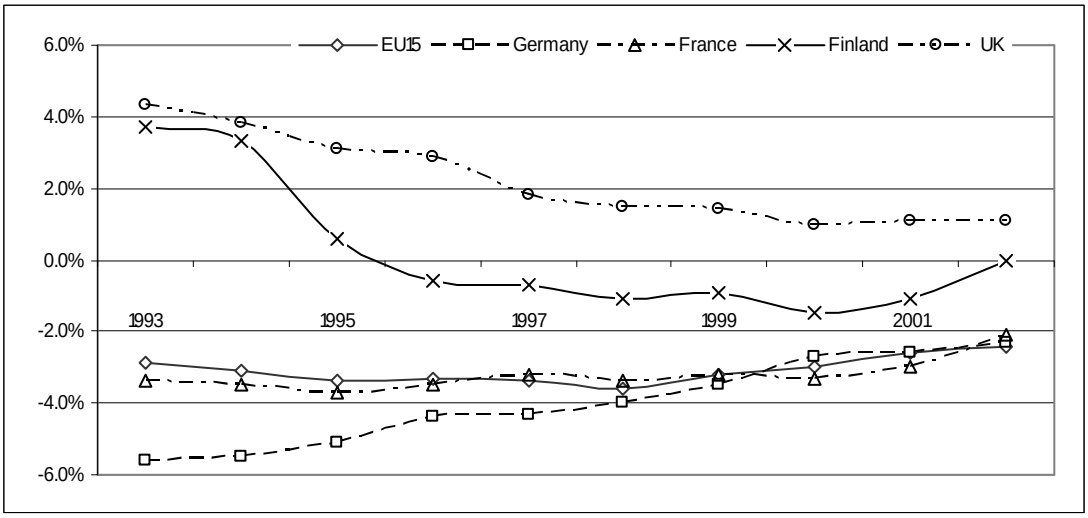
Figure 14 shows the gap between male and female unemployment rates, and thus depicts gender differences in the risk of becoming unemployed, and in the opportunity to re-enter the labour market in case of becoming unemployed. Female unemployment exceeds male unemployment in Germany and France. In the case of Germany, the *gender unemployment gap* was probably emphasized by the fall of the Berlin Wall: In the GDR, female labour force participation was much more common than in the FRG. Thus, Reunification brought an increase of female labour supply. The accommodation of this labour supply in the restructuring of the East German labour market was a lasting process. This is also reflected by the fact that the gap between male and (higher) female unemployment rates narrowed only slowly throughout the 1990s.

Aside from this issue, the picture of a higher female unemployment in Germany and France resembles that of most other OECD countries and corresponds to the uneven distribution of

labour market risks and opportunities between men and women. Women generally show higher flows into and lower flows out of unemployment. The UK and Finland (at least in the early 1990s) stand out as exceptions, seeming to offer better employment opportunities for women. However, these figures indicating lower rates of female unemployment are related to some particularities of the British and Finnish labour market structure.

In Finland, more than two-thirds of the employees in the extensive public sector are women (see ILO Bureau of Statistics 2007). Before the recession of the early 1990s, work in the public sector was commonly based on permanent work contracts, and thus offered good protection against labour market insecurities. Moreover, the industrial sector, with a comparatively low proportion of female employees, was hit particularly hard by the labour market crisis. Nevertheless, it should be noted that even in Finland where egalitarian roles are encouraged, female labour market position is inferior to that of men what is still closely related to higher female burdens in domestic responsibilities (see Ollikainen 2006; see generally Azmat, Güell & Manning 2006). In fact, with the recovery from the labour market crisis in the second half of the 1990s female unemployment again exceeded male unemployment.

Figure 14: Gender Unemployment Gap in Finland, France, Germany, and the UK



Source: *OECD Employment and Labour Statistics 2007b. SourceOECD online-database.*
Notes: *Negative values depict female unemployment rates exceeding male rates.*
All values in percentage points (male minus female unemployment rate).

In the UK, in contrast, unemployment of women is generally lower than that of men. A distinctively lower share of female long-term unemployment compared to Germany, France, or most other OECD countries supplements this finding. The underlying causes, however, are

not substantiated by superior female labour market opportunities, but are rather related to the structure of restrictive unemployment support. When eligibility for unemployment support ceases in the UK[120], there is no incentive to report being unemployment. In contrast to men, however, women commonly turn to domestic duties, particularly in the context of predominantly traditional gender roles in the UK. Hence women frequently try to regain a job from a status of economic inactivity[121]. In fact, flows *from inactivity* to work (*and not from unemployment to work*) of British women rank among the highest in Europe. This proportion of inactivity to work flows (47,2% in 1993) clearly exceeds the share in France or in Germany (17,6% and 23,5%). On the contrary, flows *from unemployment* to inactivity are higher in the UK compared to Germany or France (see Rubery et al. 1998: 121, 138).

The context depicted above suggests that female unemployment in the UK is not inevitably lower, but rather underreported.[122] This results from the combined impact of a dynamic labour market and a rudimentary unemployment benefit system that widely relies on individual efforts to regain a job, thus limiting incentives to report individual unemployment. In the other three observed countries, especially in Finland and Germany, the unemployment benefit system is much more elaborate (see Table 15 on p.218). In contrast, in the UK the risk of remaining in unemployment is reduced, while the system of unemployment insurance is limited in its capability to protect from the economic risks of unemployment, thus fostering incentives for a quick labour market re-entry.

---

[120] This is usually after six months. Unemployment assistance (income-based job seekers allowance) is strongly limited due to means testing on basis of partner / household income, thus limiting the incentive to report the unemployment, particularly in households with a male breadwinner (see also Table 15, p.218).

[121] All unemployment levels specified above are based on the ILO definition (those who are out of work in the reference week, want a job, have actively sought work in the last four weeks, and are available to start work within the next two weeks). Hence, the ILO indicator does not rely on "registered" unemployment. However, search activities are an integral element of the ILO definition. This "active job search" is probably hampered by not registering with an unemployment office, thus inducing an underreporting of actual unemployment in the UK.

[122] This is of special importance for an empirical analysis of how unemployment influences fertility decisions, as it suggests that a clear separation between unemployment and inactivity is a difficult endeavour in countries where benefit systems are rudimentary or eligibility is limited.

5.4.3 Institutional Regulations and Social Policy Settings[123]

Unemployment Benefit Regulations

The following overview will outline benefits and transfers related to unemployment and parenthood. It remains unclear how such transfers directly affect the transition to parenthood (see also the discussion in Section 3.5). Particularly with respect to the time span that separates the decision to have a child from childbirth, a direct positive impact of unemployment benefits on family formation remains unclear. It is questionable, if actors do indeed *plan* childbirth in anticipation of a supportive impact of unemployment benefits, especially as this would require to remain unemployed from the point of deciding to have a child until after childbirth, which is nine or more months later. However, a generous support of parents through augmented unemployment benefits signals protection from economic risks, thus alleviating some of the hardships of unemployment that tend to hamper the realization of family formation plans. It is likely that an extensive unemployment support provides the actors with a general sense of economic backing and security. Moreover, for women such support helps to maintain a minimum degree of economic independence from a breadwinner.

Finland combines generous regulations of entitlement combined with comparatively high payments. Moreover, labour market reintegration is fostered by public training centres (OECD 1995: 109). In contrast, unemployment insurance payments in the UK are low and cover only a short duration of six months. Subsequent unemployment assistance is widely unavailable due to means testing based on household income. Hence, if a breadwinner exists in the household, unemployment support usually ceases after six months. Consequently, this establishes a profound economic dependence on a breadwinner and either exerts a strong pressure to re-enter the labour market, or has most likely a traditionalising effect on the partnership if the woman is unemployed. In Finland, France, and Germany the amount of transfers is reduced with unemployment *assistance*, but benefits are available for a longer duration than in the UK, where the rules for eligibility for unemployment assistanvce are quite restrictive.

[123] Note that this outline of institutional and policy regulations focuses on the settings relevant during the relevant time for which the empirical analysis will be conducted, that is 1994 to 2001.

Furthermore, in Germany and Finland, unemployment payments increase if the beneficiary has dependant children[124].

Table 15: Unemployment Benefit Regulations in 2002[125]

	Benefit reception – duration in months		Entitlement Requirements	Income Replacement:	Additional parental benefits
	Insurance(2)	Assistance	Employed months	*(2)	*(2)
UK	6	unlimited(3)	none	50€-83€ per week	-
D	6-32	unlimited	12 within 36	60% of net	7% of last net
France	4-60	unlimited	4 within 8	57,4% of net / 23,88€ per day/min	-
Finland	23	unlimited	10 within 24	20%- 42% of net + 22,75€ per day	4€-8€ per day

(1) Additional regulations apply. Duration and benefit reception were subject to change between 1994 and 2002. For details refer to Pellizari (2004: 39f.)

(2) The duration and amount of benefit reception may vary according to the duration of the employment record (contribution period), the age and the family situation of the beneficiary if ranged value is specified.

(3) Income-based job seeker's allowance. Means tested minimum support (based on family income). Only available if the partner works part-time or less (<24 hours/week).

Source: MISSOC 2002; Carone, Immervoll, Paturot & Salomäki 2004.

Parental Support

The following section will provide an overview of child-related benefits and incentives that directly (as in the case of monetary transfers) or indirectly (as in the case of leave regulations) affect fertility decisions. Moreover, such institutional regulations diminish opportunity costs of parenthood, for example, where the coverage of public childcare disburdens parents from care duties, or increases opportunity costs, for example, where policy regulations reinstate traditional gender roles, thus increasing maternal burdens.

In our sample of welfare states, two major pathways can be identified in the field of family policies: On one side, certain countries promote regulations that make it easier to combine work and family. They do so by encouraging flexible working hours and by establishing ex-

[124] Germany: 7% of previous net income; Finland 4€ to 18€/day (see MISSOC 2002).

[125] Specified regulations apply to the period of the empirical investigations to be conducted (1994 to 2001).

tensive day- and infant-care systems. This is the case, particularly in Finland[126] and France. On the other side, there are family policy regimes that, through financial policies or regulations, encourage women to retreat from the labour force. This is actively accomplished in Germany, through generous leave regulations in combination with a low coverage of public childcare, resulting in an extensive female labour market absence subsequent to childbirth. In Great Britain, traditional carer roles are encouraged primarily through a neglect of public care supply (see Lewis 1992).

The maternity and parental leave regulations among these four countries underline the impression that German family policy cultivates a traditional division of labour. In all four countries during the period of observation (1994-2001), maternity leave payments take the form of a replacement of previous (net) wages. Only France and Finland also offer a paid paternity leave around birth, thus promoting paternal engagement in childcare. Given the duration and the amount of wage replacement, France, Finland and Germany roughly offer about the same level and duration of maternity leave payments (see Table 16). In the UK, however, wage replacement lasts for only 6 weeks (a low-level flat rate is available for an additional 12 weeks), which consequently adheres to the logic of a liberal market economy that encourages a swift return of mothers to the labour force. This conclusion is further backed by the fact that parental leave schemes were non-existent before 1999 and currently only last for 13 weeks. Job return guarantees are limited to the duration of maternity protection and parental leave (see MISSOC 2002). In contrast, Germany and France combine lasting parental leave payments with even longer rights of reinstatement as part of their leave policies (3 years with 2 years paid). Although the leave can be shared among the partners, parental leave in practice however is taken almost solely by mothers. Only a marginal proportion of the fathers take up part of their leave, even in Finland (see Aaberge et al. 2005: 137). The long duration of the leave provides a strong incentive for French and German women to retreat from the labour force, and Germany further nourishes this rationale by rationing childcare supply. In contrast, in Finland the parental leave is based on an income replacement, offering significant payments and thus encouraging female labour market integration prior to parenthood. In combination

[126] Although it should be noted that Finland is perhaps rather traditional with respect to families policy settings, compared to the other Scandinavian countries, it is nevertheless the most progressive among the analysed countries in encouraging egalitarian gender roles.

with a limited duration of eligibility (compared to Germany and France), this offers a strong incentive for labour-market reintegration of mothers.

Table 16: Leave Regulations and Family Related Subsidies

	Maternity & Paternity Leave		*Net wage replacement* [5]	*Additional Parental Leave*	*Child Allowance*
	Duration	Type	%	Leave & Subsidies	(1st child)
UK	6 weeks	maternity	90 [1]	13 weeks since 1999	105€ flat / month
	12 weeks	maternity	115€ / week [1]		
D	14 weeks	maternity	100	3 years; flat rate for 2 yrs (307€, means tested)	154€ flat / month
F	16 weeks	maternity	100	3 years; flat rate for 2 yrs with 2nd child (496€) APE(3) + 160€ for 3 yrs APJE(4)	none (111€ for 2nd child)
	3 days	paternity	100		
Fin	17,5 wks.	maternity	~70 [2]	26,5 weeks, ~70% net wage replacement (2)	90€ flat / month
	3 weeks	paternity	~70 [2]		

(1) Statutory Maternity Pay. Means tested option of Maternity Allowance (115€/week, for 18 weeks).
(2) Min. 11,45€/day flat or higher wage replacement (depending on labour contracts).
(3) Allocation Parentale d'Education; 1994 extension of parental leave regulations: Eligibility with the 2nd child (previously the 3rd child). Prerequisite 2 years of employment within last 5 years.
(4) Allocation Pour Jeune Enfant, childrearing leave.
(5) No wage replacement for unemployed except in Germany (low flat rate by health insurance); Parental leave payments for unemployed in Germany and France (see [3] & [4]).
Sources: Kamerman 2000, MISSOC 2002.

The parental transfer systems in the observed countries show the lowest levels of support in the UK. Considering the financial burdens of rearing a child, we can assume that the transition to parenthood from a position of unemployment requires a sound backing by an income earner. Monetary subsidies of parents take the from of a means tested flat rate in France and Germany. But under the French APE (Allocation Parentale d'Education) they are only paid for higher order births, excluding first children. In terms of first-birth transitions, only Germany offers significant monetary transfers, for which unemployed persons are also eligible ("Erziehungsgeld").

The opportunity costs of parenthood, and thus also the incentives to start a family during (female) unemployment is fundamentally affected by institutional support to combine gainful employment with parenthood in the form of public childcare provision (see Gornic, Meyers & Ross 1996). In our sample, Finland has by far the most elaborate system of external care for infants and young children with a high level of coverage. This complies with the Scandina-

vian model of subsidizing family services to enable the combination of work and family. With a similar level of coverage, the childcare system in France is also able to disburden parents in this regard (see Neyer 2003). The UK follows the principle of encouraging diversity and dynamics on a widely privatised care system (see Mahon 2002: 354). Although there is some financial support for childcare in the UK, the costs of childcare for working parents remain among the highest in the EU (see Bradshaw & Finch 2002). Just like in the UK, German parents face increased costs of external childcare if (familial) support networks are unavailable, particularly in the West of Germany, where the supply of public childcare is underdeveloped. For the East of Germany, the higher coverage of childcare has been positively associated with fertility (see Hank et al. 2004).

Concluding this overview, Finland displays the most generous system of family support with a clear aim of enabling the combination of family and work. This is in part also true for France. Germany, which also spends large amounts on family support, still follows a policy that favours the male breadwinner-principle (see Pfau-Effinger 1996: 479). The respective package of financial and childcare support tends to detract women from the labour market and establishes strong dependencies from the man. In the case of sequencing parenthood and unemployment, one situation of dependency is followed by another. Higher educated women in particular will probably try to avoid such a consolidation of labour market absence (see Aaberge et al. 2005 141f.).

5.5 Data and Methods

The following overview will outline the fundaments of the empirical analysis. Section 5.5.1 provides some introductory notes on the design of the European Community Household Panel (ECHP). Section 5.5.2 describes the population of the analysis, which includes birth cohorts from 1955 to 1983, observed between 1994 and 2001. Special attention is given to limitations regarding the observation of first-birth transition in the ECHP, and the set of covariates used in the multivariate estimates. Section 5.5.3 outlines the causal design of the multivariate analysis and specifies the statistical characteristics of the applied piecewise constant hazard estimates.

5.5.1 The European Community Household Panel

The empirical analysis is based on data of the European Community Household Panel (ECHP). This longitudinal data set provides representative data on the population in the EU member states between 1994 to 2001. Data collection was harmonized ex ante (see Günther 2003), making the ECHP a unique data base for comparative research across the EU. The sample of countries in the empirical analysis consists of the UK, Germany, France and Finland. For Germany and the UK, the ECHP data was cloned from national panels, namely the British Household Panel Study (BHPS) and the German Socio-Economic Panel (SOEP)[127]. Hence, in these cases an ex post data harmonisation was carried out, which however was strictly oriented on the ECHP questionnaire and data-structure, providing comparability in most areas. For the selected countries, all eight waves of the ECHP are available except for Finland, which has only been taking part in the ECHP since 1996.

The focus of the ECHP questionnaire rests on income and labour market-related topics. Unfortunately, the availability of subjective indicators, as well as of demographic and family related information is clearly limited. This curtails the set of indicators in the following empirical analysis. In detail, several issues that were stressed in the theoretical model (see Chapter 4) cannot be considered. Among others, the ECHP provides no data on childbearing preferences or on preferences for alternative (i.e. occupational) goals. Moreover, data on partnership duration is only available for married couples.

5.5.2 Data Description and Population of Analysis

First-Births in the ECHP

In the analysis of gender-specific effects of unemployment on family formation, I focus solely on the transition to *first*-parenthood[128]. As the ECHP lacks biographical information on par-

[127] Data structure and contents of the ECHP questionnaire were initially designed with a close orientation on SOEP and BHPS. Thus, the cloning process provides a high level of data congruency.

[128] The life course change, and hence the pondering of becoming a parent is much more complex than the choice to have additional children (see Hobcraft & Kiernan 1995). Moreover, most parents tend to place first and second birth into a rather narrow time frame, what results in the increased probability of childbirth if a couple already has a young child (see Kreyenfeld & Huinink 2003; see also the discussion in Chapter 4).

enthood, the identification of biological kinship is a difficult endeavour. Parent-child status is assigned on basis of observed household composition. Parents who no longer live with their child in the same household may spuriously appear to be childless. This results in two biasing effects: a) an underestimation of the number of parents (if a parent misleadingly appears to be childless because he or she no longer shares a household with the child), or b) in a misspecification of the timing of first birth (if the parent no longer lives with his/her first child, the oldest co-residing child will be misinterpreted as first-child). This bias however is limited, as even the oldest of the observed cohorts, born in 1955, most likely still lived together with their first child in 1994. The mentioned bias of misspecifying the timing of family formation (or the status of being childless) is perhaps most severe for men, who – after a separation – no longer share a household with their first child.

Set of Covariates & Unemployment Indicators

The individual-centred variables considered in the estimates include the net *monthly personal income*, as an indicator of the ability to support a family, and the reception of individual-based *transfers*. These monetary indicators have been adjusted for purchasing power parity within the EU to guarantee comparability across countries as well as over time. Educational attainment in the ECHP is provided in the form of the ISCED indicator[129]. This classification aggregates formal and vocational degrees, and is applied in the model as an indicator of human capital investments and labour market options. As outlined above, information regarding childbearing preferences is unavailable, just like detailed indicators of individual biographical plans.

There is a central group of variables that pertain to labour market participation. I will distinguish between different forms of activity, namely, full-time and part-time employment, being in education, economic inactivity, and housework. Special attention will be paid to different measures of unemployment. The individual experience of unemployment is available on a monthly basis in the ECHP calendar of activities. All the information within the calendar of activities is subject to self-ascription. Thus, it is not necessarily congruent with the ILO-concept of unemployment (see footnote 121). A possibly biasing effect might occur with respect to jobless respondents. That is, where the eligibility for unemployment benefits is re-

stricted, this may also affect the respondents' self-perception of activity status, which might result in stating either unemployment or economic inactivity[130]. This is an issue, particularly where benefit eligibility ceases after a relatively short time as in the UK (see p. 216f.). Hence, I will carefully consider the impact of economic inactivity in the empirical investigation as a potentially sequential state, succeeding longer unemployment episodes. As unemployment has been assumed to signal bleak labour market prospects and deteriorating human capital, the *duration* of unemployment will form an integral part of the analysis. In this context, I will distinguish between short-term unemployment (which I define as up to four months of continuous unemployment) and longer unemployment episodes. While longer periods of unemployment reveal difficulties encountered in quickly regaining a new job and hence are likely associated with discouragement, shorter periods of unemployment are frequently related to frictional unemployment in search for a new job, and thus are limited in their impact on family formation rationales. Further distinctions, particularly in consideration of long-term unemployment, would have been promising but are precluded due to limitations in case numbers. However, I will take into account whether a person has had periods of long-term unemployment during the last five years, assuming that this hampers occupational prospects and thus, affects family formation.

Gender-Specific Analysis and Partner Data

I will consider the transitions to first parenthood for women as well as for men. To elaborate gender-specific particularities, especially in the context of unemployment, it is essential to estimate separate models for men and for women. To account for the fact that the situation and resources of the partner still play a vital role, the individual-centred models will be supplemented with according partner data (Model IV)[131]. The partner variables to be considered include net personal income, relative income (one-third or less of partner, about even with part-

---

[129] "International Standard Classification of Education" (for details see OECD 2001b).

[130] Due to reasons of SOEP data conversion, the German calendar of activities includes only *reported* unemployment. A biasing effect however is limited, as unemployment in Germany is commonly reported in order to become eligible for unemployment insurance and assistance benefits.

[131] Partner-based estimations can be only be carried out for persons with valid information on the partner (i.e. survey participation of the partner). Where couples do not share a joint household, or where a partner refuses to participate in the ECHP (unit non-response), an analytical focus on couples incorporates a bias in the estimates. Moreover, 10% – 20% of first-births in the ECHP or not covered in the partner models as some first-births are by single mothers, while some couples do not share a household (at the time of deciding to have a child).

ner, one-third or more than partner, reflecting relative bargaining power), transfers reception (signalling economic dependence), and vocational and educational attainment (as an indicator of human capital investments), as well as a possible unemployment of the partner. More generally, these partner indicators provide vital information when family formation is backed by a second earner, and they offer a view on the degree of traditionalism in gender roles in a specific couple.

5.5.3 Design of the Multivariate Analysis

The empirical analysis is organised to account for the effect of different consequences of unemployment on the likelihood to start a family. For each of the selected countries, France, Finland, Germany, and the United Kingdom, a model for men and a model for women will be estimated separately in order to outline country-specific, as well as gender-specific effects. Model I examines the mere effect of individual unemployment on the likelihood to start a family and differentiates between the impact of short-term (up to 4 months) and longer unemployment (> 4 months). This distinction of unemployment duration is also the basis for all further models (except for Model III). Model II implements a broad set of covariates. Unemployment duration is conceptualised as part of the employment status, aside from full-time and part-time employment, education and inactivity. Model III resembles Model II but relies on the consideration of interaction effects between educational attainment and unemployment (no duration effects considered). As outlined above, Model IV integrates partner data. Again differentiating between men and women, Model V aggregates the data across the four countries, and interaction effects between country and unemployment are calculated.

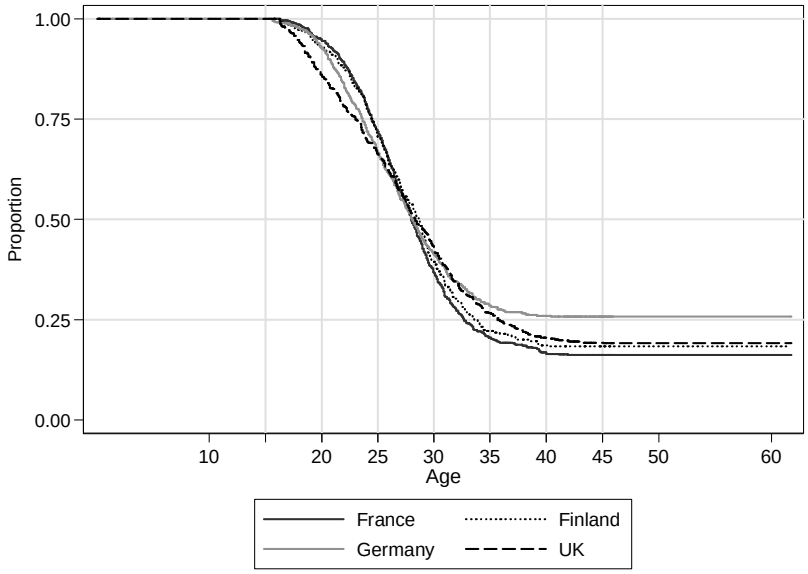
Dependent Variable in the Event History Model

The dependent variable in the event history model is the occurrence of a first birth. In the ECHP, the time of birth is available on a monthly level[132] I argue from a perspective that perceives the first birth as a consequence of a rational decision, in which this decision is critically influenced by constraining factors at the time of this decision. The point of making this

[132] While the month of birth was unavailable for Germany in the original ECHP data, it has been supplemented on basis of SOEP data for the study at hand.

decision is approximated with a point in time *ten months prior to birth*. The key goal is to account for endogeneity problems in the influence of the set of covariates and particularly of unemployment on the fertility decision[133]. This procedure of backdating may at first glance appear to be vague in representing the time of decision. However, Bongaarts (1982: 76f.), with reference to various medical studies, highlights that the probability of a couple that plans to have a child to conceive within one cycle lies at 50% and is even higher among younger parents below 30. This suggests that the proportion of couples for whom the backdating provides a misspecification of more than two to three months is limited. Hence, a biasing effect on model estimates due to inaccurate backdating should be considered but is likely limited in the size of effect. The procedure to backdate by ten months will hence likely provide conservative results.

Figure 15: Kaplan Meier Estimates of First-Birth Transitions of Women (Cohorts 1955-1983)



Source: ECHP 1994-2001 (author's estimates); *n of subjects= 8.093 / n of events = 1.952.*

The focus on the population at risk requires the exclusion of persons who are widely inhibited from childbirth due to age. The time at risk in the empirical model starts with age 16 (which is

[133] What is most important is that a backdating of ten months guarantees integrity of the measured direction of causality. That is, all covariates are measured *before* the time of conception and hence *before* deciding to have that child. A misspecification of the duration effect of unemployment occurs in cases, where the decision for parenthood was made earlier than the assumed ten months prior to birth. Sensitivity tests that have been carried out however suggest that backdating the month of birth between ten and twelve month provides similarly robust results.

also the age of eligibility for participation in the ECHP) and lasts until age 45. Although we can find a postponement in the timing of births throughout all Western societies, the transition to first parenthood beyond the age of 45 is rare, which applies for both genders – at the very least – due to biological limits (see Sections 2.1.4 & 2.1.6; see also Figure 15). As the delay in the timing of births also includes a catching-up at higher ages – especially among higher educated persons – age has to be an integral part of the model.

Specification of the Statistical Model

In sum, I consider any first births between the parental ages of 16 to 45 during the time of analysis (1994 to 2001). Focusing on the duration until first-birth occurrence, I apply *event history methods* in analysing the impact of unemployment. The time axis of the model is constituted by the age of the respondent in months. Process time starts with the first month in the 16th year since the respondent's birth (month 193). The time of observation starts with entry into the panel. This is the case if a person is a respondent in the ECHP starting wave in 1994, if a panel member reaches the 16th year of age, or if a person moves into a panel household. The period of observation ends ten months prior to the occurrence of the first birth or at panel exit, in which case the spell is regarded as censored. Finally, I consider respondents of the cohorts 1955 to 1983 who are still childless (i.e. who are still at risk of first birth).

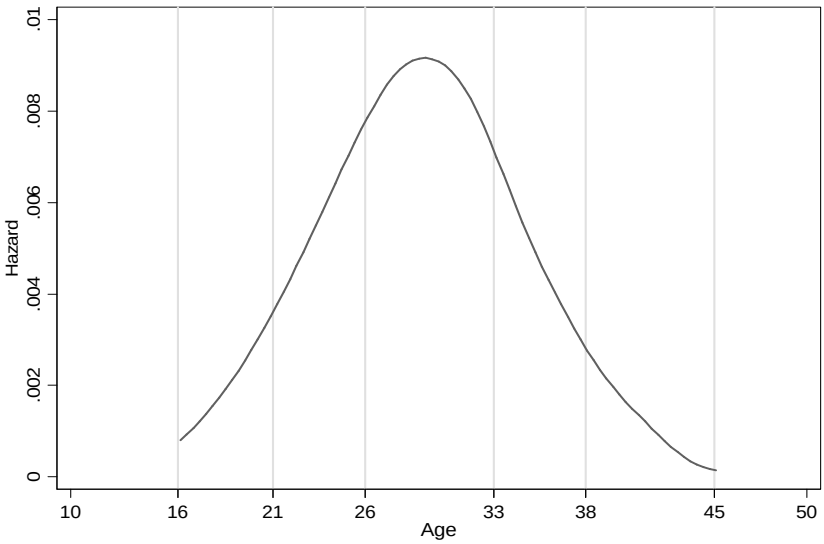
As first-birth risk (taken as proxy for the first-birth decision) is not uniformly distributed across the age range in question a model is required that is capable of incorporating the functional form of the baseline hazard (see Figure 16). An appropriate model in this case is a piecewise-constant exponential hazard model (see Jenkins 2005: 38f.),[134] which is specified in the following form[135]:

$$\theta(t)=\begin{Bmatrix} \overline{\theta_1}\exp\left(\beta' X_1+\gamma' Z_1(t)\right) & t_1\in(\ \ 0;252) \\ \overline{\theta_2}\exp\left(\beta' X_2+\gamma' Z_2(t)\right) & t_2\in(253;312) \\ \overline{\theta_3}\exp\left(\beta' X_3+\gamma' Z_3(t)\right) & t_3\in(313;396) \\ \overline{\theta_4}\exp\left(\beta' X_4+\gamma' Z_4(t)\right) & t_4\in(397;456) \\ \overline{\theta_5}\exp\left(\beta' X_5+\gamma' Z_5(t)\right) & t_5\in(457;540) \end{Bmatrix} \tag{1.1}$$

[134] The technical application relies on a piecewise constant script for Stata, elaborated by Sorensen 1999.
[135] Values in parentheses display the age-range in months since respondents' birth.

The regression parameters γ and β refer to the time variant *(Z)* respectively to the time invariant *(X)* set of covariates. The baseline hazard $\bar{\theta}$ remains constant *within* the five intervals t_1 to t_5, where t_1 starts with the 16th year of age (month 193 since respondents birth), and differs *between* the intervals[136]. With the selection of time intervals, specified in (1.1), a normal distribution of the baseline hazard of first-birth risk is approximated, where the highest risk is assumed to rest in the interval between month 313 to 396 (age 26 to 33). Figure 16 graphically displays the separation of time intervals, based on annual age (at 16, 21, 26, 33, 38, and 45).

Figure 16: Hazard Ratio of Transition to First Birth – Women (Cohorts 1955 – 1983)



Source: ECHP 1994-2001 (author's estimates) n of subjects= 8.093 / n of events = 1952.
Note: Hazard rate based on monthly risk.

While the piecewise constant is a semi-parametric continuous time model, the time until birth is based on a discrete measurement with monthly intervals. Yet, the average duration in adult life until first birth is several years. A monthly collection of birth events may therefore be treated as an approximation of continuous data (see Jenkins 2005: 19f.).

As specified above, I include time invariant variables (e.g., gender or country of origin) as well as time variant variables (e.g., educational attainment, or benefit reception) Most of the time-varying variables, however, are available on an annual basis only. The month of a status change for a time varying variable will be based on a mean between the interview in t and the

[136] The constant hazards within each of these time intervals do in fact each represent an exponential hazard model (which in turn is a specification of the Weibull model with $\alpha = 1$).

previous interview before the change in t-1, in order to minimise any bias incorporated by improper status ascription. Where this approximation interferes with the investigated sequence of events (i.e. constraints in t_0 affect fertility choices in t_1), the information is collected from the last interview prior to the birth decision in order to maintain the focus on the implied causality of events.

5.6 Results of the Multivariate Analysis

The multivariate analysis focuses on different indicators of unemployment and precarious employment. The way in which these contexts influence family formation choices will be discussed in the following. Indicators, which have been considered, but which are not displayed with the results in Table 18 – Table 22 (p. 247ff) include control dummies for calendar year, for household size[137], as well as for the country of origin[138]. Additional omitted control variables include being in public employment, in self-employment and having a fixed term contract (see p.236 for a brief discussion). A detailed description of the empirical models beyond what was already outlined in the previous section can be found on p.246.

Basic Effects

The multivariate analysis of the effect of unemployment on family formation indicates variations across gender and country level. An initial set of estimates (Model I) only distinguishes the impact of short-term (1-4 months) and longer unemployment (>4 months), ignoring any further covariates[139]. In this context, I find clear evidence for gender-specific opposing effects of unemployment on family formation. The impact is consistently negative among men and positive among women. Only women in France and men in the UK deviate from this picture, and do not show any significant effects. More generally, the impact of unemployment remains insignificant if unemployment duration is rather short. That is, it is predominantly longer un-

[137] Household size serves as indicator of potential care networks, presumably reducing opportunity costs.

[138] Furthermore, the categories in the dummy sets on *activity status* on *educational attainment (ISCED)*, on *relative income*, on *marital duration*, on country of origin and on *household size* have been supplemented by a dummy-category for missing data.

[139] A model immanent consideration of the piecewise constant baseline hazards is included in all models.

employment episodes of more than four months of continuous unemployment that show significant effect levels. The impact of *longer* unemployment is negative among men and positive among women. Women in Finland however deviate from this otherwise persistent pattern across those countries, where unemployment affects family formation rationales. Among Finsih women, only shorter unemployment episodes of up to four months show a positive effect on the likelihood to start a family. The latter effect also remains widely constant across all estimated models.

A Detailed View on Unemployment across Countries

Controlling for a set of covariates reveals key characteristics of gender differences in the role of unemployment in family formation. Aside from occupational discouragement in the case of longer unemployment episodes, the reduction in disposable household income is perhaps the most drastic occurrence related to losing a job. Importantly, the negative impact of unemployment on deciding to become a *father*, previously found in France, Finland, and Germany, vanishes after controlling for net monthly income, transfer reception, and educational attainment[140] in the estimates. This provides an initial hint that the negative unemployment effects among men are closely related to a decline in breadwinner capabilities as a lacking prerequisite for family formation (see also Oppenheimer 1994; Tölke 2005). In contrast, among women in Finland, Germany, and the UK, the pronounced positive impact of unemployment on the propensity to start a family remains fairly robust after controlling for additional characteristics. After considering (among other factors) the impact of partnership-status, income reception and educational attainment (see Models II & IV), the effect of longer unemployment among women (short-term unemployment in the case of Finland) persistently remains about two to three times higher than among full-time working women with a permanent contract (reference category).

In analysing the effects of the duration of unemployment, I have also considered linear effects with a decreasing marginal utility, representing a growing discouragement that reaches a maximum after a specific amount of time. However, estimates not displayed revealed that there are obviously different threshold level effects across countries (most likely related to the

duration of eligibility for unemployment insurance benefits and their amount), which affect the relation between unemployment duration and the propensity to start a family. Summarizing these findings, the assumption of a simple linear effect of unemployment duration could not be validated with significant results[141].

An initial summary of the duration effects of unemployment suggests that the perceived increases in insecurity and economic risks are limited in their impact on family formation as long as they are associated with shorter unemployment episodes. Obviously, welfare support tends to cushion the initial negative economic consequences of unemployment. An impact of unemployment that entails discouragement regarding occupational prospects sets in only after a longer duration of labour market absence. Obviously – with the exception of Finland, where brief episodes of job absence already tend to show an impact – short-term unemployment only causes a limited detachment from the labour market, and thus a limited impact on family formation rationales.

Yet, it should be noted that it is not possible to distinguish between persons who have entered unemployment voluntarily, those who are confident they can quickly regain a job, and persons, who have lost their job involuntarily. Among the latter group, some certainly anticipate bleak occupational prospects after only a short duration of unemployment. The distinction between shorter and longer unemployment episodes only serves as an approximation, with the goal of separating the confident job-searcher from the discouraged unemployed, for whom the impact on family formation is likely more pronounced. In this context, the fact that even short-term unemployment among Finnish women increases the likelihood to have a first child (and increases the reluctance to do so among Finnish men, for whom the effect however is rather spurious) could be a consequence of the Finnish labour market crisis during the 1990s. This crisis most likely had a strong negative impact on economic and, in particular, occupational prospects, thus promoting the transition to motherhood even in an institutional

---

[140] Additional estimates not provided with the multivariate results on p.247ff., could trace the negative effect of unemployment among men primarily to the role of forgone income combined with an impact of educational attainment and the backing of a second earner.

[141] In this context, a distinction between short-, mid-, and long-term unemployment would certainly have been useful, but was rejected in favour of obtaining stable estimates under given case numbers. Moreover, given the fact that the exact measurement of unemployment duration at the time of family formation is opposed by an approximation of the time of fertility decision through backdating, conducted sensitivity tests suggest that a distinction between shorter and longer unemployment provides sufficiently stable results.

context that otherwise offers comparatively good conditions to combine work and family. That is, this takes place in an institutional context that should generate only a limited need to place the transition to motherhood within an unemployment episode.

While longer unemployment among women in Germany and the UK shows particularly robust effects of an increased likelihood to start a family, France is the only example among the observed countries, where unemployment generates a *negative* impact on the decision to become a mother. However, this effect of longer unemployment only shows a low level of significance (p=0.085) and should thus be interpreted with caution. Yet, what is interesting is that this indicator is only significant after controlling for partner characteristics (like partner income, partner education, and individual income relative to that of the partner; see Model IV). This means that even in a context where a partner could compensate the loss in family income caused by the female unemployment, French women still favour labour market reintegration over family formation. Obviously, women in this country place a high value on economic independence, which is also supported by the finding that a higher relative income among French women *reduces* the probability of deciding to have a child. These findings are in line with the perception of an extensive and accurate system of family support in France that enables women to combine occupational and familial responsibilities. These findings are furthermore consistent with a cultural background that does not rely on strict norms of maternal care, as in Germany, e.g., and that has a long tradition of encouraging female labour market attachment (see Veil 2005; see also Section 3.4).

Nevertheless, there are some indications that persistent occupational hardships also tend to distract women from their occupational engagement in France: Only among French women, can I identify a relation between variations in regional unemployment rate and the likelihood of deciding to have a first child. An increase in the unemployment rate by 1 percentage point increases the propensity to start a family by 3%. However, once again, these results should be interpreted with caution: The referred result is based on a low level of significance and France remains the *only* country with any significant relation between regional unemployment rate and first-birth risk. These somewhat “meagre” findings should not be interpreted to suggest that bleak economic prospects do not affect the realization of family formation plans. However, they sheds some doubt on the assumption that unemployment rate is an appropriate indicator of how the actors evaluate occupational prospects. This also nourishes the impression

that the mechanism translating perceived aggregate unemployment – or more generally aggregate economic indicators – into fertility behaviour is perhaps more complex than implied by frameworks like the Easterlin Hypothesis (1962, 1966), or the Butz & Ward model (1979, see critically Kramer & Neusser 1984, or Macunovich 1995).

Economic Inactivity

In the above section, I have discussed that, in the UK, the female return to work frequently occurs from a position of economic inactivity (see Section 5.4.2). This is important since it highlights that the distinction between unemployment and inactivity is closely related to national models of coping with unemployment – both individually and in terms of institutional unemployment support. In this context, some of the unemployment in the UK – particularly if it is longer unemployment – appears as economic inactivity. This is the case when job search activities or at least the availability for work is a prerequisite of unemployment support. Unemployment insurance and particularly the duration of eligibility for benefits is extensive in the all of the observed countries. However, in the UK, eligibility for unemployment benefits ceases after a relatively short time. Yet, where search activities are no longer compulsory because the duration of unemployment exceeds the period of benefit eligibility, the link to the labour market becomes more fragile. In such a context, actors are more likely to perceive themselves as being inactively out of the labour force, rather than being unemployed[142]. The same applies, if repeated failure in job-search activities has discouraged the confidence to re-enter the labour market in the near future. Importantly, the monthly activity status in this context is recorded as a self-ascribed status in the ECHP.

Underlying this line of reasoning is that economic inactivity does not only succeed a longer unemployment episode but is also closely related to occupational discouragement. In this context, starting a family from a position of economic inactivity could also be attractive as a means of compensating for the loss in social esteem, which is likely profound after an extended period of inactivity, given strong norms to participate in gainful employment or at least to focus on alternative, socially accepted forms of activity like parenthood. Indeed, the multivariate findings suggest distinct effects of economic inactivity on the propensity to decide for

[142] Detailed tests of the association between unemployment and economic inactivity nourish the assumption that inactivity is frequently a sequential state that suceeds a longer unemployment episode.

the transition to *motherhood*. The strength of the effects varies from an increased likelihood of 50% in France and Germany, to a likelihood of starting a family during periods of inactivity in the UK that is more than 6 times higher than among full-time employed women. The fact that this impact is extensive in the UK and comparatively weak among German women is most likely indebted to the fact that lasting eligibility for unemployment insurance benefits in Germany maintains a closer link to the labour market, and thus to the status of being in unemployment. In contrast, a higher number of jobless women tend to report their status as inactive in the UK, where job-search activities are no longer compulsory even after a short duration of unemployment, undermining a close attachement to the labour force.

Moreover, economic inactivity primarily shows an impact among women. In contrast, among men, economic inactivity signals a profound inability to support a family. However, male inactivity is generally rare, and the impact on the likelihood to start a family remains widely insignificant. Exceptions to this rule are men in the UK, who show an increased rate of transition into first-parenthood during inactivity. This relation is only significant in the partner model (Model IV), which means that another income earner and a stable relationship frequently back this inactivity. This finding appears to contradict the UK as being a strong breadwinner country (see Lewis 1992). However, the occupational pressure in this liberal market economy could in fact lead to a reversal of traditional roles. Where men are incapable of regaining a job and thus fulfilling a breadwinner role, the economic support by a female income earner could nourish the tendency to compensate for the occupational status loss by focusing on a male homemaker role[143] (see argumentatively Tölke & Diewald 2003 for Germany). Yet, the reversal of traditional gender roles remains a somewhat speculative assumption. Further investigation in future research might shed more light in this issue and unravel whether this finding indeed represents a reversal of traditional roles under social pressure.

[143] Initial unemployment insurance payments in the UK cease after 6 months with subsequent social assistance payments (see also Section 5.4.3). These payments are based on household income *and* family size, which poses an additional incentive to have a child, where occupational prospects are bleak. Perhaps a labour market reintegration is anticipated, as long as unemployment insurance regulations encourage job-search activities, while a longer labour market absence severs a close occupational link, thus boosting the decision for family formation.

Earlier Long-Term Unemployment

The effect of earlier long-term unemployment (12 months or more) during the last 5 years was considered in the multivariate analysis in order to account for latent factors of economic insecurity and deterioration of one's occupational position. In detail, I assume a twofold impact effect for persons, who have experienced this lasting exclusion from the labour market in their recent occupational biography. 1) Prior long-term unemployment persistently hampers labour market integration and obtainable income prospects by deteriorating skill endowments. While this effect can in part be ruled out by the consideration of personal income in the empirical models, the second issue is perhaps more important. 2) The experience of long-term unemployment increases occupational insecurities, thus undermining occupational prospects and economic reliability. In this context, the experience of long-term unemployment might function as a trigger event that might either signal reduced breadwinner capabilities among men, or encourage a focus on family formation as an alternative biographical option beyond employment (see DiPrete & McManus 2000; Friedman et al. 1994).

In fact, the impact of previous long-term unemployment appears to be most pronounced in France, where among men, an instable and precarious employment career clearly hampers the ability to support a family. What appears to be a straightforward relation at first glance, however should be interpreted with caution: The effects only show a low level of significance and disappear after controlling for partner characteristics. In Model V, which integrates all country-level effects into one model for men and one for women (both utilize partner data), I cannot find any significant impact of previous long-term unemployment among men.

Among women, two different patterns distinguish France on one side from Germany and the UK on the other side. For French women, the experience of long term unemployment during the last five years – obviously lastingly – *increases* the likelihood to opt for motherhood. Perhaps a focus on motherhood *as alternative* to employment in France only sets in after a close link to the labour market has been harmed, undermining the otherwise pronounced labour market focus, common among French women.

In contrast, for women in Germany and the UK, long-term unemployment during the last five years shows a *negative impact* on the likelihood to decide for a first child. At first glance, this seems to contradict the pronounced positive impact of longer unemployment among women in these countries. However, this apparent contradiction is most likely a selection ef-

fect of women with a strong labour market attachment: Given that long-term unemployment in Germany and the UK tends to speed up the transition to motherhood, this excludes the concerned women from the sample, as they are no longer at risk to perform the transition to parenthood. Thus, women that *remain* in the sample in t_1, though having experienced long-term unemployment in t_0 are primarily women that reject starting a family in a context of precarious employment. In contrast, among French women, long-term unemployment probably initiates a detachment from the labour market that results in a latent diffusion process into motherhood, rather than an *immediate* retreat from the labour force.

Additionally, estimates have addressed the role of the number of unemployment episodes a person experienced during the last five years. This indicator however did not show any significant impact on the propensity to opt for starting a family[144]. Considering this finding and the comparatively weak impact of the experience of previous long-term unemployment, the estimates suggest that the experience of instability and precariousness in one's work career appears to be limited in causing a sustained impact on family formation rationales. Instead, rather the current experience of occupational insecurity among women tends to support ad hoc considerations of combining joblessness with the transition to parenthood. French women however deviate from this pattern. For them, a detachment from the labour market appears to be a lasting process, while current experiences of occupational insecurity obviously play a smaller role than in the rest of the observed countries. This interpretation is consistent with the fact that French women face few incentives to combine unemployment with the transition to motherhood, as culturally embedded norms of female care are weak, and as social policy support encourages a parallel combination of work and family. Perhaps this institutional context also enables women to *plan* their fertility to a greater extent than in Germany or the UK. Yet, the suggested context of a latent detachment from the labour force due to occupational insecurities among French women requires closer investigation. This issue would be a fruitful subject for future research. Until then, the suggested relation remains somewhat speculative.

Additional factors in the context of precarious employment that have been tested include part-time employment[145], fixed term contracts, as well as self- and public employment[144]. Part-

[144] Due to the limited explanatory power, the mentioned variables were included in the estimates but have been omitted in the displayed results on p.247ff.

[145] Part-time work in the ECHP is defined as working more than 15 hours and less than 30 hours a week.

time employment and working under a temporary contract is assumed to signal an incomplete integration into the labour force and insecure career prospects (see Kurz 2002; Kim & Kurz 2003). Yet, the empirical investigations did not provide convincing evidence in this direction. Though both part-time work and fixed term contracts showed clear negative patterns with respect to starting a family for both men and women in all countries, none of these contexts are statistically significant, except for a weak and instable effect of fixed term contracts for German women. Also public employment, which usually should guarantee a higher degree of reliability and regard for parental needs does not provide any stable results. Only self-employment among men in the UK and in France shows clearer signs of being supportive of starting a family. Though this evidence is surprising at first glance, as self-employed persons are usually expected to have a high workload and require flexible time budgets, self-employment also relates to a sound establishment in a business context, thus offering reliable prospects for financially supporting a family.

Unemployment and Educational Attainment[146]

I have argued that the impact of unemployment should vary with individual educational attainment, thus affecting the cost of labour market absence. Model III, which considers interaction effects between educational/vocational attainment (ISCED) and unemployment, barely shows any signs of an association between unemployment and family formation across educational groups among men. Only Finnish men with a medium level of educational attainment (ISCED 3) have a slightly reduced propensity to opt for becoming a father, the significance level, however, is rather low. In contrast, among women, there is clear evidence of a differential impact of unemployment across educational groups. Generally, higher educated women (ISCED 5-7, tertiary, partially academic education) show *no* increased likelihood to start a family during unemployment. As theoretically argued, women with profound skill endowments obviously focus on a labour market reintegration in order to avoid a depreciation of their human capital investments. This applies across all of the observed countries, and hence regardless of differences in work-family compatibility due to welfare state orientations.

[146] It should be noted that the ISCED indicator (see Section 2.2.1; OECD 2001b), applied in the ECHP in order to achieve cross-national comparability in educational levels, still suffers from a limited comparability of educational certificates across countries (ISCED 0-2 = secondary schooling; ISCED 3 = upper secondary schooling & vocational education; ISCED5-7 = third level, i.e. higher vocational and academic education).

However, women in Finland, Germany, and the UK with mid- to lower educational/vocational attainment show an *increased* probability to place the transition to parenthood within an unemployment episode. In Germany and the UK, this impact is most pronounced among women with lower levels of education. These women combine adverse occupational prospects with a limited threat of human capital depreciation due to their already low level of skill endowments. Moreover, the UK and Germany are also the two countries that combine the highest opportunity costs of parenthood with prevalent traditional gender role ascriptions. Hence, it is obviously women with comparatively bleak labour market prospects in contexts of institutionally and culturally mediated work family incompatibilities that decide for a first child while being unemployed. Yet, it should be noted that Finnish women (significant impact of unemployment & medium level education) generally can rely on a higher institutional support of combining work and motherhood. However, given the deep recession during the 1990s, the experience of unemployment among mid-level educated women[147] most likely signalled severe difficulties in regaining a job, thus nourishing rationales to start a family.

The Partner Model (IV)

The view on partner characteristics allows for a consideration of the way in which the economic backing of a partner might compensate for the experience of occupational insecurities. Moreover, this consideration also highlights contexts in which one partner might aim at economic independence, particularly by trying to return to the labour market when unemployed, instead of focusing on a homemaker role. Importantly, the pronounced impact of female unemployment and inactivity in Finland, Germany, and the UK remains well in place, after taking into account partner information such as income level and educational attainment. A view of the partner's unemployment provides a picture that corresponds with the results derived from individual unemployment: This context only shows a statistically significant level among men, that is, only the (female) unemployment of wives increases the aptitude to have a child. Again, French women show an exception to this rule. That is, in the partner model (IV) longer unemployment of wives of French men does not show any significant impact. It can be

[147] *Lower* educated women in Finland show no increased likelihood of family formation during unemployment. However, this educational group is comparatively small in both the Finnish society as well as in the ECHP

speculated that this is both a reflection of the close labour market attachment of French women, as well as an indicator of an urge to avoid a regress to traditional family roles and economic dependence, particularly in a cultural context where a focus on maternal roles provides fewer chances of acquiring social esteem.

With respect to the duration of a partnership, it was speculated that a longer duration fosters reciprocity and mutual trust, and thus serves to restrict the perceived risk of abandonment and the significant other exploiting his/her economically superior position. While the results should be interpreted with caution as only marital duration could be considered, the evidence across all four countries for both women and men is widely consistent in suggesting that primarily the transition to marriage is crucial in fostering family formation rationales, rather than the *duration* of the partnership. In fact the likelihood to start a family increases with the transition to marriage but then declines with marital duration.

The Cross-National Model (Model V)

A final set of estimates (Model V) summarizes the analysis of key indicators in two cross-nationally comparative models for men and for women. Interaction effects distinguish different measures of unemployment by country. The results of these unemployment indicators are widely consistent with the country-specific estimates. In this context, male unemployment shows no significant effects on the aptitude to start a family in any of the four countries after controlling for income, education, and partner characteristics. This does not necessarily contradict the often-stressed assumption that labour market related insecurities hamper male breadwinner qualities, and thus nourish the postponement of fertility transitions. However, under male unemployment, the imminent effect of reduced financial backing plays a key role. The deviation from the traditional norm of an economically potent household head certainly still exerts a negative impact on the transition to fatherhood in most societies. There is still a dominant norm that family formation requires men to pass a certain threshold of economic reliability, guaranteeing breadwinner capabilities (see Oppenheimer 1994: 322). Yet, where the decline in income is compensated by welfare state support, by occupational prospects due to high skill investments, and by the backing of a female earner, the negative impact of unemployment is no longer dominant in family formation choices. That is, where personal and institutional arrange-

what most likely increases the standard errors in the estimates, thus leading to insignificant results.

ments are capable of compensating for the economic setbacks of male unemployment, this occupational hardship does not appear to signal persistently reduced breadwinner qualities.

Moreover, the view of men in the UK supports the view that the status loss due to unemployment might be compensated for by becoming a father (for this line of reasoning see Tölke & Diewald 2003). The occupational status loss due to unemployment is particularly extensive in a liberal market economy, where participation in gainful employment is crucial for social recognition, and thus for self-esteem. Compensating for this status decline with a focus on a family role might be an option among men who have been profoundly discouraged in their attempts to regain a job. For them, the low price of time might encourage a participation in parental responsibilities, thus disburdening the woman and increasing the probability of family formation. However, a *reversal* of traditional gender roles that are still prevalent in the UK is perhaps a daring assumption, particularly given that the outlined effect did not prove to be very stable.

Among women, a positive impact of unemployment and economic inactivity on the likelihood to start a family is salient. The effect is most pronounced among women in the UK, who have been unemployed for a longer period. They show a 2.4 times higher likelihood to opt for having a child. If these women report economic inactivity – which was stressed as an indicator of discouragement in job-search activities – the likelihood is even 4 times as high as among full-time working women. In Germany, a slightly weaker effect of longer unemployment (a 74% increased probability) provides a picture that otherwise widely resembles the situation in the UK. Yet, there is no significant effect of economic inactivity in Germany. This perhaps is a consequence of sustained unemployment support that retains a link to the labour market by encouraging job-search activities, which makes a self-perception of being economically inactive unlikely.

The findings for Finland were unexpected. Even a rather short duration of unemployment increases the likelihood of starting a family by the factor 2.3. This widely resembles the situation in the strong breadwinner countries of Germany and the UK, and clearly distinguishes Finland from the French context, where women show a close labour market attachment and a high reluctance to start a family during unemployment. These results are surprising, as the Finnish welfare state shows the highest performance in encouraging egalitarian gender roles, in protecting from life course risks, and in supporting the reconciliation of work and family

roles for women. Hence, the incentive of reducing opportunity costs by combining unemployment and the transition to parenthood should clearly be reduced in Finland. There is strong evidence that this fertility behaviour is closely related to the recession and labour market crisis Finland experienced during the early 1990s. Obviously, the adverse labour market conditions had a lasting impact on the perception of occupational prospects and insecurities, thus fostering family formation as a focus beyond occupational activity. Nevertheless, these results also raise some questions of whether the institutional arrangement in Finland is indeed doing so well in alleviating the burdens on women that result from combining occupational and family roles.

5.7 Summary & Conclusion

Among men, unemployment hampers family formation. This context, however, is essentially related to the imminent effects of a reduced financial backing, whereas I did not find any consistent evidence that unemployment persistently signals reduced breadwinner qualities beyond the direct economic setbacks. Among women, unemployment encourages the transition to parenthood if occupational prospects are bleak, or if a close link to the labour market has been broken. This is reflected in the finding that particularly longer periods of unemployment and subsequent economic inactivity speed up the transition to parenthood. Moreover, I find a pronounced impact of unemployment among women with a lower educational and vocational attainment. These findings are particularly pronounced in Germany and the UK, two countries that leave the burden of reconciling occupational engagement and parenthood to women. Importantly, these two countries combine contradictory institutional arrangements by nourishing occupational aspirations, particularly among younger women, while traditional gender roles are still culturally embedded and institutionally reproduced – for example by neglect of maternity protection and support (UK), strict maternal carer norms (Germany), and by an underdeveloped supply of public childcare (in both Germany and the UK).

The consequence of these contradictory institutional arrangements in market (i.e. individual) oriented and in family oriented institutions (see McDonald 2000) are high opportunity costs of parenthood. These opportunity costs are further increased by the necessity of estab-

lishing an autonomous and independent economic position, last but not least, in order to compensate for limited institutional protection from life course risks and economic hardships. This leads to a strong female labour market attachment. Against this background, only longer unemployment episodes that have already hampered labour market integration show a positive impact on to the likelihood to start a family.

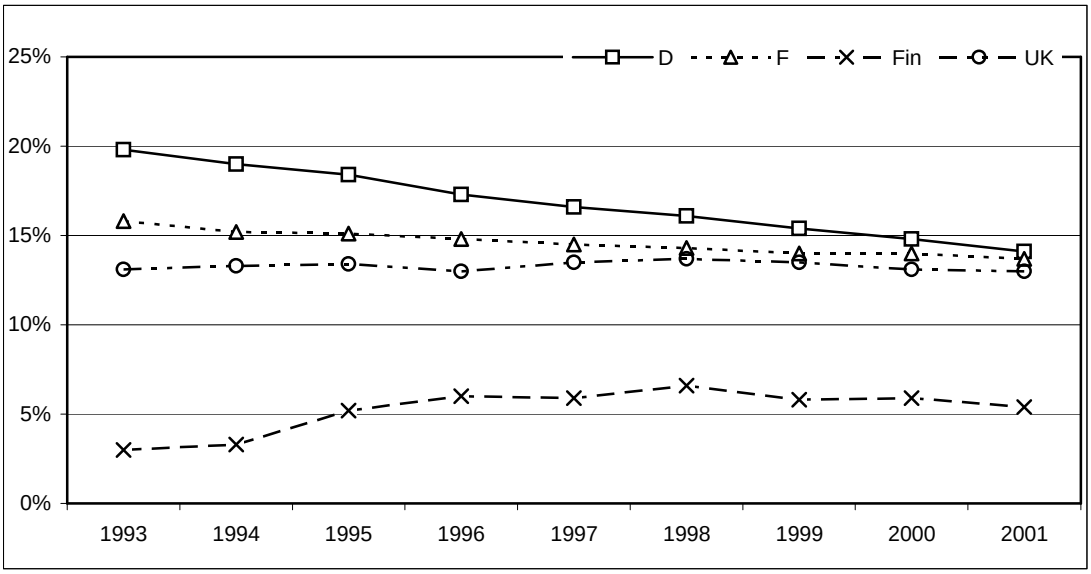
The view on the UK and Germany supports the assumption that family formation in these countries is closely related to two major factors: First, high burdens of combining familial and occupational roles, particularly among women; and second, the implicit norm to first integrate into the labour market in order to transfer educational investments into safe occupational status positions. This context results in family formation during unemployment being a promising option, particularly among lower educated women, who frequently already depend on support from a male earner, whose partner relations are thus more traditional, and who face bleak labour market prospects compared to women with higher skill endowments. In contrast, higher educated women are reluctant to place the transition to parenthood within an unemployment episode. Rather, these women focus on a reintegration into the labour market obviously in order to avoid a reduction to the role of the sole homemaker, which would not only lead to a depreciation of their human capital investments and hamper their career options, but which would also establish economic and social dependence from a breadwinner.

Except for the findings for Finland, which are biased by a severe labour market crisis that hampered occupational prospects, the evidence suggests a close labour market attachment of women in Germany and the UK, and particularly in France. While family formation during unemployment is obviously a promising option due to the low price of time among German and British women, women in these countries only opt accordingly if a close link to the labour market has been severed, and chances of quickly finding a job have been discouraged.

5.8 Appendix:

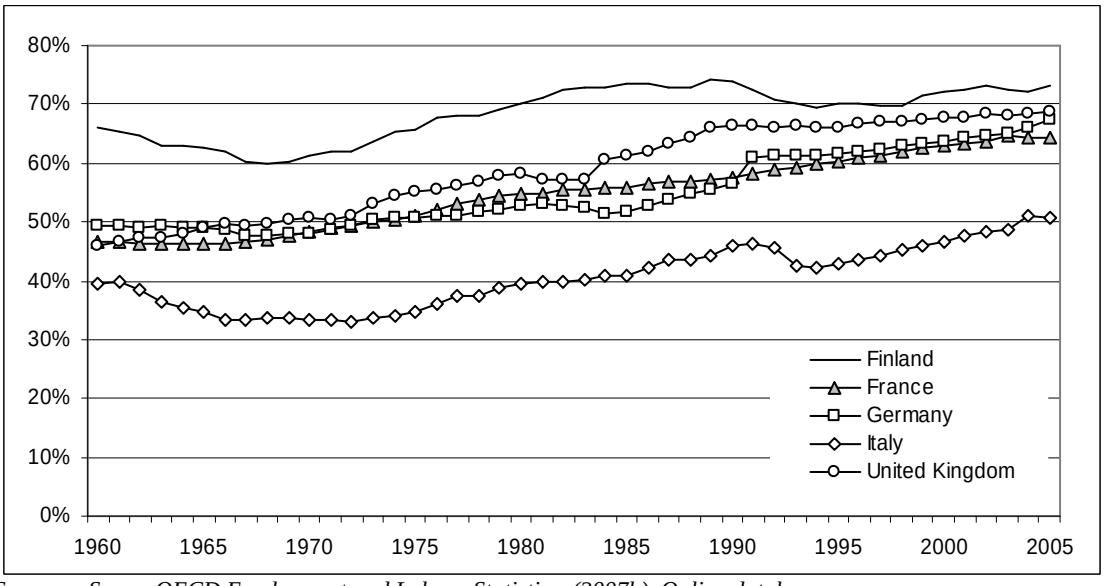
(A) Additional Structural Indicators

Figure 17: Male-Female Employment Ratio Gap1993 – 2001



Source: SourceOECD Employment and Labour Statistics, (2007b). Online database.

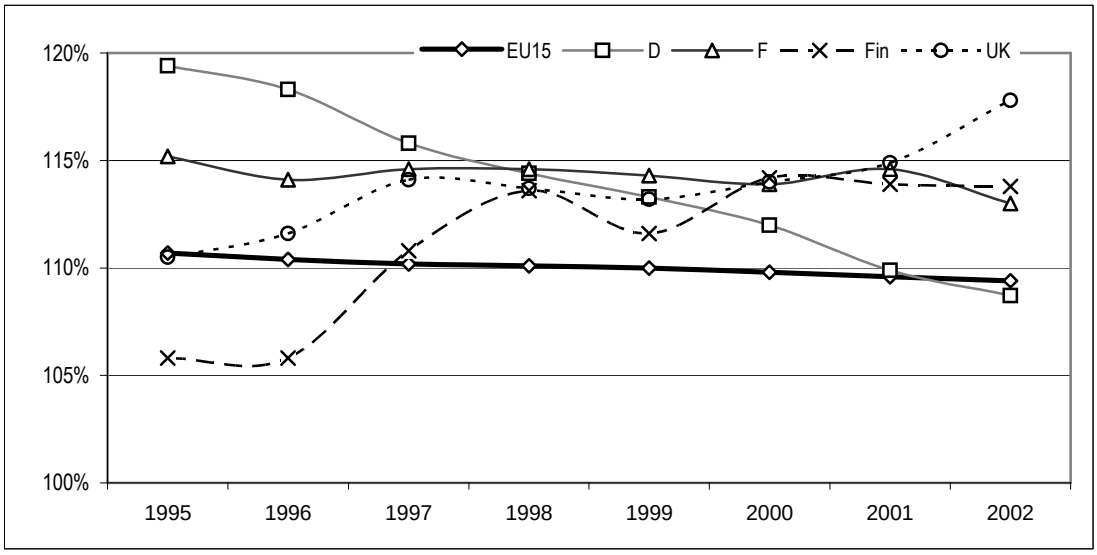
Figure 18: Female Labour Force Participation 1960 – 2005 by Country



Source: SourceOECD Employment and Labour Statistics, (2007b). Online database.

Note: Values for Germany before 1991 apply to West Germany only.

Figure 19: Gross Domestic Product (GDP) per Capita in Purchasing Power Standards (PPS)



Source: *Eurostat Structural Indicator, 2007. Online database.*
Note: *EU25 = 100.*

(B) Descriptive Statistics

(See following page)

Table 17: Sample of Respondents – Selected Descriptive Statistics

Descriptive Statistics (all values in percent)	*France*		*Finland*		*Germany*		*UK*	
	Men	**Women**	**Men**	**Women**	**Men**	**Women**	**Men**	**Women**
Birth Cohorts								
1955-1964	18.9	14.5	21.7	16.5	21.8	17.7	27.2	21.6
1965-1974	47.5	44.6	31.7	27.0	47.1	43.6	43.1	41.9
1975-1983	33.7	41.0	46.6	56.5	31.1	38.7	29.6	36.5
Partnership Status								
Single / Living Apart Together	74.5	69.1	68.8	61.2	68.4	58.3	60.8	55.0
Consensual Union	12.9	14.8	16.8	20.4	12.6	15.2	14.8	15.7
Married	12.6	16.1	14.5	18.4	19.0	26.3	24.3	29.3
Duration of Marriage up to 1Y.	2.2	2.6	1.6	1.9	2.4	3.1	2.8	3.1
Duration of Marriage 2-3 Years	4.8	5.8	5.3	6.2	6.1	7.7	8.1	8.7
Duration of Mar. 4 Years & More	4.8	6.9	6.6	9.3	8.9	13.7	11.7	15.4
Educational Attainment								
ISCED levels 0-2 (lower 2nd Lvl.)	26.5	21.4	32.0	33.2	32.2	32.7	34.9	32.6
ISCED level 3 (upper 2nd Lvl.)	34.2	35.4	52.5	42.0	52.1	52.1	15.1	16.2
ISCED levels 5-7 (3rd Lvl. Ed.)	21.0	26.6	15.4	24.4	12.8	10.5	46.5	48.9
Activity Status								
Full-time & Permanent Contr.	35.6	25.3	30.4	20.7	41.7	34.1	52.5	43.8
Full-time & Public Employment	7.2	8.3	6.1	7.1	9.0	14.8	9.6	15.8
Full-time & Fixed Term Contract	6.9	5.3	6.4	8.6	4.7	4.1	3.1	3.2
Part-time Employed	2.5	5.5	3.0	5.1	4.3	6.5	3.3	6.5
Self-Employed	3.1	1.1	8.1	2.4	3.6	1.3	7.1	2.8
In Education/ Apprenticeship	27.7	38.1	26.3	39.4	24.8	28.8	13.8	18.7
Economically Inactive	2.7	2.6	0.7	1.1	0.5	2.5	2.3	3.4
Retired / Other / Missing	5.6	4.2	10.1	8.5	5.1	3.0	1.9	2.1
Unemployment								
Unemployed (UE)	8.8	9.6	8.9	7.4	6.4	5.1	6.4	3.7
Short-term UE (1-4 months)	3.2	3.4	3.4	3.4	2.4	1.9	2.4	1.7
Longer UE (> 4months)	5.6	6.2	5.5	4.0	4.0	3.2	4.0	1.9
Long-term UE during last 5 Yr.?	8.2	7.8	12.7	7.3	6.1	4.9	11.1	4.6
Partner Context								
ISCED Levels 0-2	24.0	28.6	12.9	14.7	14.9	14.1	30.5	26.2
Level 3	36.0	34.6	46.5	56.1	67.5	60.1	13.1	13.1
Levels 5-7 (3rd Lvl. Edu.)	30.1	26.0	40.4	28.9	16.2	24.5	54.9	58.6
Relative Income: Similar Level	29.8	29.3	24.0	23.1	39.2	38.9	35.8	38.4
Traditional (♂ 1/3 above ♀)	46.8	46.6	45.5	41.9	42.9	41.3	45.8	39.1
Fem. Main Earner (♀1/3>♂)	13.5	14.1	16.5	19.1	13.8	15.4	12.6	16.8
Both not working	6.3	6.8	9.6	11.2	2.9	3.1	3.5	3.6
Employment: Partner Inactive	4.5	1.2	1.0	0.4	3.9	0.7	5.9	1.3
Partner Unemployed	12.1	6.7	9.5	7.8	5.1	4.8	2.7	4.2
n of person-months	155.211	127.291	77.893	62.872	166.077	133.783	120.035	98.510
n of cases	2.851	2.465	1.635	1.389	2.754	2.372	2.177	1.861
n of cases w. Partner(Model IV)	1.198	1.208	782	786	1.321	1.356	1.183	1.103
n of births (backdated) '94-2000	579	632	249	250	547	588	456	480

Source: ECHP 1994-2001 (author's calculations).

Note: Sample description reflects person-months of observations (i.e. repeated records for each observed person), except where specified differently; values in percent.

(C) Piecewise-Constant Exponential Hazard Estimates on First-Birth Risk

Model Description:

Model I: Duration of unemployment, prior to the month of decision for parenthood (t_{birth} – 10 months). Binary coding of:
Short-term (up to 4 months of continuous unemployment);
Mid-term (more than four months of continuous unemployment).
All adult respondents of cohorts 1955-1983

Model II: Duration of unemployment, prior to the month of decision for parenthood (t_{birth} – 10 months). Unemployment duration measured as part of the employment status with full-time employment as reference category. Additional covariates (net-income, ISCED, partnerships status, etc. Long-term unemployment during the last 5 years, unemployment rate (nuts1 level).
All adult respondents of cohorts 1955-1983

Model III: Interaction effects of unemployment by education (at t_{birth} – 10 months).
Identical to Model II. Exception: Unemployment duration excluded in favour of interaction effects of unemployment by educational attainment (ISCED).
All adult respondents of cohorts 1955-1983

Model IV: Partner Model (at t_{birth} – 10 months).
Identical to Model II. Exception: Covariates on partner added, incl. partner's income, partner's unemployment/inactivity, partner's education, relative income.
Only couples with partner being panel respondent, cohorts 1955-1983.

Model V: Cross national partner Model (at t_{birth} – 10 months).
Identical to Model IV. Date pooled across country.
Only couples with partner being panel respondent, cohorts 1955-1983.

Note: Models I through IV are based on separate estimates by gender for each country; Model V is based on differentiation solely by gender.

Table 18: Determinants of First-Birth Risk - Piecewise Constant Estimates for **France** by Gender (note: this table continued on next page)

	Model I				Model II				Model III				Model IV			
	Men		***Women***		***Men***		***Women***		***Men***		***Women***		***Men***		***Women***	
	haz.	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**
Baseline Hazard (Effects apply to Hazard / Month)																
16 to 21 Years	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.01	(0.01)***	0.01	(0.00)***
22 to 26 Years	0.00	(0.00)***	0.01	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.01	(0.00)***	0.01	(0.00)***
27 to 33 Years	0.01	(0.00)***	0.01	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.01	(0.01)***	0.01	(0.00)***
33 to 38 Years	0.01	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.01	(0.00)***	0.00	(0.00)***
39 to 45 Years	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***
Ever Worked?																
Yes (1)					1.51	(0.61)	1.33	(0.29)	1.51	(0.61)	1.36	(0.30)	0.95	(0.38)	1.09	(0.26)
Activity Status *Reference:* Full-time Employed w. Permanet Contract (Omitted Categories: Full-time w. Fixed Term Contract / FT+Public Employ. / Self Employment)																
Part-Time Employed					0.78	(0.25)	1.17	(0.17)	0.78	(0.25)	1.17	(0.17)	0.76	(0.25)	1.13	(0.17)
In Education/Apprentice					0.50	(0.18)**	0.41	(0.10)***	0.49	(0.17)**	0.42	(0.10)***	0.46	(0.19)*	0.35	(0.10)***
Economically Inactive					0.48	(0.30)	1.71	(0.40)**	0.50	(0.31)	1.73	(0.41)**	0.87	(0.54)	1.55	(0.39)*
Short-Term UE (1-4 months)	0.87	(0.22)	1.23	(0.24)	1.32	(0.33)	0.99	(0.20)					1.50	(0.49)	0.95	(0.21)
Longer UE (5 or more mo.)	0.40	(0.11)***	0.81	(0.14)	1.04	(0.30)	0.79	(0.15)					1.26	(0.43)	0.69	(0.15)*
UE*Lower Educ. (ISCED 0-2)									1.48	(0.45)	0.76	(0.21)				
UE*Mid Education (ISCED 3)									0.77	(0.32)	1.03	(0.23)				
UE*Higer Educ. (ISCED5-7)									0.66	(0.40)	0.72	(0.19)				
Partners Employment Status																
Unemployed / Inactive													1.03	(0.14)	1.17	(0.27)
Long-term UE (>12Months) During the last 5 Years? *Reference:* Not Long-Term UE during last 5 years																
Yes (1)					0.71	(0.15)*	1.25	(0.16)*	0.69	(0.15)*	1.22	(0.16)	0.81	(0.17)	1.25	(0.18)

Table continued on next page…

Table 18 continued…

	Model I				Model II				Model III				Model IV			
	Men		***Women***		***Men***		***Women***		***Men***		***Women***		***Men***		***Women***	
	haz.	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**
Regional UE Rate																
(Nuts1 Level)					1.02	(0.02)	1.03	(0.02)*	1.02	(0.02)	1.03	(0.02)*	1.03	(0.02)	1.04	(0.02)**
Education *Reference:* 2nd Stage of Secondary Education (ISCED 3)																
Less than 2nd Stage of Secondary Education (ISCED 0-2)					1.12	(0.13)	1.07	(0.13)	1.08	(0.13)	1.11	(0.14)	1.13	(0.13)	1.03	(0.14)
Third Level Education (ISCED 5-7)					0.84	(0.10)	1.07	(0.10)	0.84	(0.10)	1.11	(0.11)	0.83	(0.10)	1.16	(0.12)
Individual Income (Euro/Month PPP adjusted)																
Net Income, Work & Assets					1.12	(0.03)***	1.08	(0.05)	1.12	(0.03)***	1.08	(0.05)	1.09	(0.03)**	1.12	(0.06)**
Public Transfers (excl. Unemployment Benefits)					3.47	(1.22)***	5.96	(1.34)***	3.42	(1.20)***	5.96	(1.34)***	3.35	(1.22)***	6.63	(1.70)***
Type of relationship *Reference*: Single / Living Apart Together																
Consensual Union					21.47	(5.47)***	6.48	(1.20)***	21.37	(5.44)***	6.49	(1.20)***	*Reference:* Consensual Union			
Married for up to 1 Year					47.18	(12.81)***	10.29	(2.16)***	47.29	(12.80)***	10.33	(2.16)***	2.16	(0.33)***	1.57	(0.26)***
Married 2 to 3 Years					55.36	(14.69)***	16.16	(3.22)***	54.97	(14.57)***	16.20	(3.23)***	2.52	(0.27)***	2.33	(0.26)***
Married 4 Years or more					35.69	(9.73)***	10.18	(2.15)***	35.52	(9.66)***	10.17	(2.15)***	1.66	(0.22)***	1.49	(0.20)***
Partnerinformation (Reference categories as above)																
P. Education (ISCED 0-2)													0.95	(0.13)	1.10	(0.13)
P. Education (ISCED 5-7)													1.14	(0.12)	0.85	(0.10)
P. Net Income (Euro/Month PPP adjusted)					1.14	(0.04)***	1.13	(0.02)***	1.14	(0.04)***	1.13	(0.02)***	1.15	(0.05)***	1.09	(0.03)**
Relative Income *Reference:* Equal Income Level																
Traditional (♂ 1/3 above ♀)													1.02	(0.11)	1.14	(0.13)
Fem. Main Earner (♀1/3>♂)													0.76	(0.14)	0.72	(0.12)*
n of Person-Months =	152429		124894		152429		124894		152429		124894		38752		38521	
n of Subjects / Events =	2851 / 579		2465 / 632		2851 / 579		2465 / 632		2851 / 579		2465 / 632		1198 / 551		1208 / 556	
Log Pseudolikelihood =	-212.28		171.1		352.14		326.82		353.91		327.25		456.01		491.24	
Wald Chi^2 =	15650.00		15991.52		11739.73		12878.16		11771.69		12859.51		10011.78		9423.06	

Source: ECHP 1994 to 2001 (author's calculations). *Significance levels based on $p < 0.10$ (*), $p < 0.05$ (**) and $p < 0.01$ (***).*

Table 19: Determinants of First Birth Risk - Piecewise Constant Estimates for **Finland** by Gender *(note: this table continued on next page)*

	Model I				Model II				Model III				Model IV			
	Men		***Women***		***Men***		***Women***		***Men***		***Women***		***Men***		***Women***	
	haz.	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**
Baseline Hazard (Effects apply to Hazard / Month)																
16 to 21 Years	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.01	(0.00)***
22 to 26 Years	0.00	(0.00)***	0.01	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.01	(0.00)***
27 to 33 Years	0.01	(0.00)***	0.01	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.01	(0.00)***
33 to 38 Years	0.01	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***
39 to 45 Years	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***
Ever Worked?																
Yes (1)					1.29	(0.72)	0.91	(0.24)	1.27	(0.71)	0.93	(0.25)	0.50	(0.24)	0.78	(0.22)
Activity Status *Reference:* Full-time Employed w. Permanet Contract (Omitted Categories: Full-time w. Fixed Term Contract / FT+Public Employ. / Self Employment)																
Part-Time Employed					1.34	(0.45)	0.74	(0.23)	1.34	(0.45)	0.74	(0.23)	1.30	(0.50)	0.66	(0.23)
In Education/Apprentice					0.50	(0.16)**	0.77	(0.17)	0.50	(0.16)**	0.76	(0.18)	0.54	(0.20)*	0.80	(0.21)
Economically Inactive					omitted		2.82	(1.15)**	omitted		2.82	(1.16)**	omitted		2.82	(1.29)**
Short-Term UE (1-4 months)	0.48	(0.24)	2.78	(0.61)***	0.50	(0.26)	2.29	(0.57)***					0.26	(0.19)*	2.29	(0.62)***
Longer UE (5 or more mo.)	0.48	(0.18)*	1.26	(0.37)	0.83	(0.32)	1.23	(0.41)					0.73	(0.32)	1.22	(0.45)
UE*Lower Educ. (ISCED 0-2)									1.03	(0.60)	1.77	(0.83)				
UE*Mid Education (ISCED 3)									0.36	(0.19)*	1.93	(0.64)**				
UE*Higher Educ. (ISCED5-7)									1.54	(0.81)	1.70	(0.55)				
Partners Employment Status																
Unemployed / Inactive													2.54	(0.53)***	0.67	(0.24)
Long-term UE (>12Months) During the last 5 Years? *Reference:* Not Long-Term UE during last 5 years																
Yes (1)					0.82	(0.19)	0.93	(0.22)	0.82	(0.19)	0.85	(0.20)	0.73	(0.19)	0.83	(0.21)

Table continued on next page…

Table 19 continued…

	Model I				Model II				Model III				Model IV			
	Men		***Women***		***Men***		***Women***		***Men***		***Women***		***Men***		***Women***	
	haz.	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**
Regional UE Rate																
(Nuts1 Level)					1.02	(0.03)	1.04	(0.03)	1.02	(0.03)	1.04	(0.03)	1.02	(0.03)	1.04	(0.03)
Education *Reference:* 2nd Stage of Secondary Education (ISCED 3)																
Less than 2nd Stage of Secondary Education (ISCED 0-2)					0.88	(0.20)	1.76	(0.38)***	0.81	(0.20)	1.78	(0.42)**	0.98	(0.26)	1.45	(0.33)
Third Level Education (ISCED 5-7)					0.85	(0.15)	1.42	(0.24)**	0.80	(0.14)	1.46	(0.26)**	0.83	(0.16)	1.52	(0.27)**
Individual Income (Euro/Month PPP adjusted)																
Net Income, Work & Assets					1.11	(0.07)	1.17	(0.06)***	1.11	(0.07)	1.17	(0.06)***	1.09	(0.10)	1.17	(0.06)***
Public Transfers (excl. Unemployment Benefits)					2.44	(0.83)***	1.51	(0.99)	2.44	(0.83)***	1.58	(1.02)	2.34	(0.88)**	1.14	(0.92)
Type of relationship *Reference*: Single / Living Apart Together																
Consensual Union					2.94	(0.90)***	8.97	(2.97)***	2.94	(0.90)***	8.99	(2.96)***	*Reference:* Consensual Union			
Married for up to 1 Year					17.55	(5.59)***	42.66	(14.79)***	17.62	(5.57)***	42.90	(14.88)***	7.03	(1.77)***	5.17	(1.29)***
Married 2 to 3 Years					8.98	(2.74)***	24.00	(8.35)***	8.82	(2.68)***	24.13	(8.36)***	3.25	(0.68)***	2.76	(0.56)***
Married 4 Years or more					5.97	(1.90)***	20.57	(7.50)***	5.95	(1.89)***	20.58	(7.48)***	2.38	(0.53)***	2.47	(0.58)***
Partnerinformation (Reference categories as above)																
P. Education (ISCED 0-2)													1.10	(0.29)	1.23	(0.30)
P. Education (ISCED 5-7)													1.44	(0.25)**	0.83	(0.15)
P. Net Income (Euro/Month PPP adjusted)					1.18	(0.09)**	1.15	(0.07)**	1.18	(0.09)**	1.15	(0.07)**	1.19	(0.11)*	1.15	(0.08)**
Relative Income *Reference:* Equal Income Level																
Traditional (♂ 1/3 above ♀)													1.06	(0.23)	1.10	(0.23)
Fem. Main Earner (♀1/3>♂)													1.10	(0.30)	0.89	(0.23)
n of Person-Months =	76413		61651		76413		61651		76413		61651		23772		23833	
n of Subjects / Events =	1635 / 249		1389 / 250		1635 / 249		1389 / 250		1635 / 249		1389 / 250		782 / 219		786 / 227	
Log Pseudolikelihood =	-129.11		-111.84		65.35		70.55		67.20		69.07		147.29		129.98	
Wald Chi^2 =	7010.22		6619.78		15563.11		8788.73		15780.84		9575.46		8664.15		7078.84	

Source: ECHP 1994 to 2001 (author's calculations). *Significance levels based on p < 0.10 (*), p < 0.05 (**) and p < 0.01 (***).*

Table 20: Determinants of First-Birth Risk - Piecewise Constant Estimates for **Germany** by Gender *(note: this table continued on next page)*

	Model I				Model II				Model III				Model IV			
	Men		***Women***		***Men***		***Women***		***Men***		***Women***		***Men***		***Women***	
	haz.	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**
Baseline Hazard (Effects apply to Hazard / Month)																
16 to 21 Years	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***
22 to 26 Years	0.00	(0.00)***	0.01	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***
27 to 33 Years	0.01	(0.00)***	0.01	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***
33 to 38 Years	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***
39 to 45 Years	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***
Ever Worked?																
Yes (1)					1.53	(0.69)	1.81	(0.52)**	1.53	(0.70)	1.79	(0.52)**	1.21	(0.68)	1.17	(0.41)
Activity Status *Reference:* Full-time Employed w. Permanent Contract (Omitted Categories: Full-time w. Fixed Term Contract / FT+Public Employ. / Self-Employment)																
Part-Time Employed					0.68	(0.19)	0.91	(0.17)	0.68	(0.19)	0.91	(0.17)	0.74	(0.22)	0.97	(0.20)
In Education/Apprentice					0.84	(0.20)	0.54	(0.11)***	0.85	(0.20)	0.54	(0.11)***	1.02	(0.30)	0.68	(0.15)*
Economically Inactive					omitted		1.53	(0.33)**	omitted		1.54	(0.33)**	omitted		1.21	(0.31)
Short-Term UE (1-4 months)	0.58	(0.22)	1.23	(0.35)	0.69	(0.27)	1.28	(0.38)					0.61	(0.27)	1.22	(0.41)
Longer UE (5 or more mo.)	0.65	(0.17)*	1.82	(0.33)***	1.11	(0.29)	2.30	(0.50)***					0.87	(0.29)	2.01	(0.54)***
UE*Lower Educ. (ISCED 0-2)									0.88	(0.33)	1.99	(0.54)**				
UE*Mid Education (ISCED 3)									0.98	(0.29)	1.74	(0.41)**				
UE*Higher Educ. (ISCED5-7)									0.47	(0.48)	1.96	(1.08)				
Partners Employment Status																
Unemployed / Inactive													1.88	(0.29)***	0.74	(0.22)
Long-term UE (>12Months) During the last 5 Years? *Reference:* Not Long-Term UE during last 5 years																
Yes (1)					0.82	(0.20)	0.80	(0.20)	0.86	(0.22)	0.87	(0.21)	0.88	(0.24)	0.64	(0.20)

Table continued on next page…

Table 20 continued…

	Model I				Model II				Model III				Model IV			
	Men		***Women***		***Men***		***Women***		***Men***		***Women***		***Men***		***Women***	
	haz.	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**
Regional UE Rate																
(Nuts1 Level)					0.96	(0.03)	0.96	(0.03)	0.96	(0.03)	0.96	(0.03)	0.96	(0.03)	0.98	(0.03)
Education *Reference:* 2nd Stage of Secondary Education (ISCED 3)																
Less than 2nd Stage of Secondary Education (ISCED 0-2)					1.28	(0.16)*	1.48	(0.17)***	1.29	(0.17)**	1.46	(0.18)***	1.34	(0.18)**	1.40	(0.18)**
Third Level Education (ISCED 5-7)					1.11	(0.13)	0.93	(0.13)	1.12	(0.13)	0.92	(0.13)	1.22	(0.16)	0.94	(0.14)
Individual Income (Euro/Month PPP adjusted)																
Net Income, Work & Assets					1.11	(0.05)**	1.27	(0.09)***	1.11	(0.05)**	1.27	(0.09)***	1.10	(0.06)*	1.26	(0.08)***
Public Transfers (excl. Unemployment Benefits)					1.03	(0.58)	13.58	(4.51)***	1.03	(0.58)	13.53	(4.49)***	0.63	(0.40)	18.16	(7.22)***
Type of relationship *Reference*: Single / Living Apart Together																
Consensual Union					2.84	(0.72)***	1.70	(0.36)**	2.84	(0.72)***	1.70	(0.36)**	*Reference:* Consensual Union			
Married for up to 1 Year					20.81	(4.86)***	9.56	(2.01)***	20.67	(4.82)***	9.56	(2.01)***	7.87	(1.52)***	6.00	(1.16)***
Married 2 to 3 Years					17.12	(4.06)***	9.98	(2.02)***	17.13	(4.06)***	9.92	(2.00)***	6.54	(1.11)***	6.25	(1.05)***
Married 4 Years or more					12.97	(3.11)***	7.26	(1.50)***	12.95	(3.11)***	7.25	(1.50)***	4.95	(0.86)***	4.77	(0.81)***
Partner Information (Reference categories as above)																
P. Education (ISCED 0-2)													1.33	(0.17)**	1.38	(0.18)**
P. Education (ISCED 5-7)													0.83	(0.12)	1.09	(0.15)
P. Net Income (Euro/Month PPP adjusted)					1.12	(0.09)	1.07	(0.06)	1.12	(0.09)	1.07	(0.06)	1.25	(0.09)***	1.11	(0.06)*
Relative Income *Reference:* Equal Income Level																
Traditional (♂ 1/3 above ♀)													1.16	(0.14)	1.04	(0.14)
Fem. Main Earner (♀1/3>♂)													1.14	(0.25)	1.06	(0.20)
n of Person-Months =	163853		131925		163853		131925		163853		131925		51642		54822	
n of Subjects / Events =	2754 / 547		2372 / 588		2754 / 547		2372 / 588		2754 / 547		2372 / 588		1321 / 491		1356 / 484	
Log Pseudolikelihood =	-313.57		-286.86		130.62		74.07		130.81		72.74		282.84		256.33	
Wald Chi^2 =	15580.61		15740.94		12711.16		13745.21		12733.39		15094.11		9490.44		9326.65	

Source: ECHP 1994 to 2001 (author's calculations). *Significance levels based on p < 0.10 (*), p < 0.05 (**) and p < 0.01 (***).*

Table 21: Determinants of First-Birth Risk - Piecewise Constant Estimates for the **UK** by Gender *(note: this table continued on next page)*

	Model I				Model II				Model III				Model IV			
	Men		***Women***		***Men***		***Women***		***Men***		***Women***		***Men***		***Women***	
	haz.	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**
Baseline Hazard (Effects apply to Hazard / Month)																
16 to 21 Years	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.01	(0.01)***	0.00	(0.00)***
22 to 26 Years	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.01	(0.00)***	0.00	(0.00)***
27 to 33 Years	0.01	(0.00)***	0.01	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.01	(0.00)***	0.00	(0.00)***
33 to 38 Years	0.01	(0.00)***	0.01	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.01	(0.00)***	0.00	(0.00)***
39 to 45 Years	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***	0.00	(0.00)***
Ever Worked?																
Yes (1)					0.74	(0.31)	1.35	(0.34)	0.82	(0.36)	1.30	(0.33)	0.60	(0.28)	0.93	(0.29)
Activity Status *Reference:* Full-time Employed w. Permanent Contract (Omitted Categories: Full-time w. Fixed Term Contract / FT+Public Employ. / Self-Employment)																
Part-Time Employed					0.97	(0.28)	1.01	(0.20)	0.98	(0.29)	1.01	(0.20)	1.06	(0.32)	1.15	(0.24)
In Education/Apprentice					0.18	(0.11)***	0.37	(0.11)***	0.19	(0.12)***	0.36	(0.11)***	0.44	(0.29)	0.46	(0.20)*
Economically Inactive					1.24	(0.47)	6.04	(1.16)***	1.30	(0.49)	5.97	(1.15)***	2.28	(1.00)*	6.31	(1.36)***
Short-Term UE (1-4 months)	1.28	(0.37)	1.11	(0.40)	1.18	(0.39)	1.27	(0.48)					1.46	(0.62)	1.40	(0.62)
Longer UE (5 or more mo.)	0.79	(0.22)	2.26	(0.56)***	0.68	(0.21)	3.00	(0.85)***					1.08	(0.39)	2.59	(1.01)**
UE*Lower Educ. (ISCED 0-2)									1.08	(0.33)	2.31	(0.76)**				
UE*Mid Education (ISCED 3)									0.65	(0.50)	1.39	(1.02)				
UE*Higher Educ. (ISCED5-7)									0.62	(0.31)	1.66	(0.66)				
Partners Employment Status																
Unemployed / Inactive													3.73	(0.65)***	1.54	(0.40)*
Long-term UE (>12Months) During the last 5 Years? *Reference:* Not Long-Term UE during last 5 years																
Yes (1)					1.01	(0.19)	0.94	(0.22)	0.97	(0.18)	1.02	(0.24)	0.98	(0.19)	0.74	(0.20)

Table continued on next page…

Table 21 continued…

	Model I				Model II				Model III				Model IV			
	Men		***Women***		***Men***		***Women***		***Men***		***Women***		***Men***		***Women***	
	haz.	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**
Regional UE Rate																
(Nuts1 Level)					1.00	(0.02)	1.02	(0.02)	1.00	(0.02)	1.02	(0.02)	1.00	(0.03)	1.01	(0.02)
Education *Reference*: 2nd Stage of Secondary Education (ISCED 3)																
Less than 2nd Stage of Secondary Education (ISCED 0-2)					1.20	(0.20)	1.34	(0.21)*	1.16	(0.20)	1.32	(0.21)*	1.40	(0.25)*	1.28	(0.22)
Third Level Education (ISCED 5-7)					1.07	(0.17)	1.10	(0.16)	1.06	(0.17)	1.10	(0.16)	1.18	(0.20)	1.14	(0.18)
Individual Income (Euro/Month PPP adjusted)																
Net Income, Work & Assets					1.01	(0.04)	1.04	(0.06)	1.01	(0.04)	1.04	(0.06)	0.98	(0.05)	1.08	(0.07)
Public Transfers (excl. Unemployment Benefits)					0.91	(0.30)	1.09	(0.41)	0.90	(0.33)	1.09	(0.41)	0.68	(0.33)	0.48	(0.26)
Type of relationship *Reference*: Single / Living Apart Together																
Consensual Union					9.61	(2.43)***	3.09	(0.63)***	9.57	(2.42)***	3.09	(0.64)***	*Reference:* Consensual Union			
Married for up to 1 Year					28.13	(7.45)***	8.57	(2.06)***	27.56	(7.30)***	8.57	(2.07)***	2.97	(0.58)***	2.58	(0.52)***
Married 2 to 3 Years					25.96	(6.67)***	9.75	(2.05)***	25.56	(6.55)***	9.71	(2.05)***	2.85	(0.42)***	3.08	(0.47)***
Married 4 Years or more					23.14	(6.03)***	6.63	(1.46)***	22.77	(5.95)***	6.65	(1.47)***	2.58	(0.38)***	2.21	(0.35)***
Partner Information (Reference categories as above)																
P. Education (ISCED 0-2)													1.06	(0.19)	1.24	(0.23)
P. Education (ISCED 5-7)													1.05	(0.17)	1.13	(0.19)
P. Net Income (Euro/Month PPP adjusted)					1.07	(0.06)	1.03	(0.05)	1.07	(0.06)	1.03	(0.05)	1.09	(0.06)	0.94	(0.08)
Relative Income *Reference:* Equal Income Level																
Traditional (♂ 1/3 above ♀)													1.25	(0.17)*	1.38	(0.20)**
Fem. Main Earner (♀1/3>♂)													1.25	(0.26)	1.04	(0.21)
n of Person-Months =	117942		96742		117942		96742		117942		96742		46227		43621	
n of Subjects / Events =	2177 / 456		1861 / 480		2177 / 456		1861 / 480		2177 / 456		1861 / 480		1183 / 423		1103 / 408	
Log Pseudolikelihood =	-247.16		-216.92		94.42		83.67		94.25		81.96		198.76		210.62	
Wald Chi^2 =	13294.98		13136.34		12029.83		13192.69		12016.81		13271.73		8758.21		1.50e+12	

Source: ECHP 1994 to 2001 (author's calculations). *Significance levels based on $p < 0.10$ (*), $p < 0.05$ (**) and $p < 0.01$ (***).*

Table 22: Determinants of First-Birth Risk - Piecewise Constant Estimates across Countries by Gender *(note: this table continued on next page)*

	Model V			
All Countries / Couples Only	***Men***		***Women***	
	hazard ratio	**se**	**hazard ratio**	**se**
Baseline Hazard (Effects apply to Hazard / Month)				
16 to 21 Years	0.01	(0.00)***	0.01	(0.00)***
22 to 26 Years	0.00	(0.00)***	0.00	(0.00)***
27 to 33 Years	0.00	(0.00)***	0.00	(0.00)***
33 to 38 Years	0.00	(0.00)***	0.00	(0.00)***
39 to 45 Years	0.00	(0.00)***	0.00	(0.00)***
Ever Worked? (Yes)	0.85	(0.19)	1.00	(0.14)
Activity Status *Reference*: Full-time Employed w. Permanent Contract (see above for omitted categories)				
Part-Time Employment	0.89	(0.15)	1.07	(0.11)
In Education/Apprentice	0.72	(0.13)*	0.55	(0.07)***
Inactive*France	0.80	(0.49)	2.00	(0.46)***
Inactive*UK (for Finland & German see note below)	1.71	(0.59)	4.00	(0.75)***
Short-Term Unemployment (1-4 Months)*France	1.53	(0.43)	1.24	(0.25)
Short-Term Unemployment (1-4)*Finland	0.38	(0.27)	2.31	(0.52)***
Short-Term Unemployment (1-4)*Germany	0.63	(0.26)	0.97	(0.31)
Short-Term Unemployment (1-4)*UK	1.29	(0.48)	1.23	(0.50)
Longer Unemployment (5+Months)*France	1.24	(0.41)	0.85	(0.18)
Longer Unemployment (5+)*Finland	1.13	(0.45)	1.24	(0.41)
Longer Unemployment (5+)*Germany	0.90	(0.26)	1.74	(0.40)**
Longer Unemployment (5+)*UK	1.03	(0.32)	2.38	(0.85)**
Partner Unemployed / Inactive	1.97	(0.16)***	1.05	(0.15)
Long-term UE (>12Months) During the last 5 Years? *Reference:* Not Long-Term UE during last 5 years				
Long-Term UE *France	0.98	(0.22)	1.77	(0.24)***
Long-Term UE *Finland	0.69	(0.17)	0.90	(0.22)
Long-Term UE *Germany	0.74	(0.19)	0.57	(0.17)*
Long-Term UE *UK	1.00	(0.17)	0.61	(0.17)*
Regional UE Rate (Nuts1)	1.01	(0.01)	1.01	(0.01)
Education *Reference:* 2nd Stage of Secondary Education (ISCED 3)				
Less than 2nd Stage of Secondary Ed.(ISCED 0-2)	1.23	(0.08)***	1.19	(0.08)**
Third Level Education (ISCED 5-7)	0.94	(0.06)	1.14	(0.07)**
Partner's Education *Reference:* (ISCED 3)				
Partner's Education (ISCED 0-2)	1.07	(0.08)	1.18	(0.08)**
Partner's Education (ISCED 5-7)	1.13	0.07)**	0.90	(0.06)
Individual Income (Euro/Month PPP adjusted)				
Net Income from Work & Assets	1.06	(0.03)*	1.10	(0.04)***
Public Transfers (excl. Unemployment Benefits)	1.43	(0.17)***	4.45	(0.77)***
Partner's Net Income from Work & Assets	1.12	(0.03)***	1.07	(0.03)**

Table continued on next page…

Table 21 continued…

Relative Income *Reference:* Equal Income Level				
Traditional (♂ 1/3 above ♀)	1.09	(0.07)	1.10	(0.08)
Female Main Earner (♀1/3>♂)	1.03	(0.11)	0.90	(0.09)
Type of relationship *Reference*: Consensual Union / Unmarried				
Married for up to 1 Year	3.47	(0.31)***	2.76	(0.26)***
Married 2 to 3 Years	3.14	(0.22)***	3.08	(0.22)***
Married 4 Years or more	2.35	(0.18)***	2.07	(0.16)***
Summary Statistics				
n of Person-Months =	160.393		160.797	
n of Subjects / Events =	4.484 / 1.684		4.453 / 1.685	
Log Pseudolikelihood =	913.04		890.85	
Wald Chi^2 =	32505.56***		31898.14***	

Source: ECHP 1994 to 2001, (author's calculations).

Notes: Significance levels based on p < 0.10 (*), p < 0.05 (**) and p < 0.01 (***).
Effects for inactivity in Germany and Finland estimated but results omitted due to low n of cases.

Notes for Table 18 – Table 22:

(1) Method: piecewise constant exponential hazard.

(2) Estimates controlled for repeated observations (robust standard errors).

(3) All estimated chi^2 values significant on basis of $p < 0.0001$.

(4) Dependent variable set at t-10 months from time of birth.

(5) Process time measured in months since person's birth.

(6) Considered age span: 16-45 years of age within cohorts 1955-1983

(7) No ECHP data for wave 1 and 2 in Finland.

(8) Estimated but not displayed variables include public employment, self-employment, fixed-term employment, country of origin, household size & control dummies for calendar year, dummy sets include flag variables for missing values, where necessary.

(9) Variable East/West included for Germany, to account for region specific effects.

(10) Net income & public transfer in purchasing power parity adjusted Euros.

Chapter Six

Labour Market Integration and the Transition to Parenthood – A Comparison of Germany and the UK

Abstract

The aim of this chapter is to investigate the hypothesis that after leaving the educational system, labour market integration has a causal effect on first-birth decisions. The analysis focuses on two major research questions: First, how is the *timing* of first parenthood associated with previous labour market performance? Second, can differences in *first birth-risks* be related to labour market performance? In other words, to what extent do the fertility decisions of successfully integrated individuals differ from those who are poorly integrated into the labour force?

To account for the impact of cross-national differences in institutional settings, I contrast the continental conservative German welfare state with the liberal market economy of the UK. To account for gender-specific differences in opportunity costs, I distinguish between men and women in this analysis. Using longitudinal micro-data from the SOEP and BHPS, I apply a piecewise constant exponential hazard model. The results show a significantly reduced first-birth risk in the case of German men with weak occupational integration, as well as in the case of British and German women with pronounced labour market attachment. Furthermore, regarding the timing of family formation, a lengthy process of occupational integration tends to delay the transition to parenthood for both men and women, especially in Germany.

Keywords: fertilty, first-birth, occupational integration, cross-national comparison.

6.1 Introduction

The transition to parenthood currently takes place at a later stage in the life course than it did a few decades ago. The tendency to postpone parenthood has led to an increase in age at first birth as well as in permanent childlessness. Setting aside other causes, this delayed transition to parenthood can be linked to an increased level of educational attainment, especially for women, accompanied by a prolonged period of time spent in the educational system. Because education is a time- intensive endeavour in the life course, transitions to parenthood during times of (full-time) education are rare (see Liefbroer 1991). Moreover, it is rational to transfer educational investments into safe labour market positions (see Mills & Blossfeld 2003). Confronting these developments alongside the increasing prevalence of discontinuous employment patterns, leads one to suggest that the creation of a stable and reliable fundament for family formation relies on time-intense labour market integration processes, which, however, are threatened by fragile occupational trajectories (see Oppenheimer & Lewin 1999).

In this paper, I investigate the interrelation between initial labour market performance and fertility decisions with respect to two major research topics: First, I address the question, how is the timing of first parenthood related to labour market performance, particularly with respect to finishing education and entering the labour market? Second, I will investigate whether differences in first-birth risks depend on variations in individual labour market performance. In other words, I will consider to what extent successfully integrated persons differ with respect to their fertility decisions from those who are poorly integrated into the labour market or who show discontinuous employment patterns.

To account for the impact of labour market structure as well as for the influence of institutional settings, I consider two different welfare state systems, namely the continental conservative German welfare state and the liberal welfare state of the United Kingdom. These two proponents of welfare states also differ clearly with respect to their market relations, in that the UK propagates low state interference in occupational relations within a liberal market economy, while Germany focuses on high trust and long-term actor-firm relations by means of a coordinated market economy (see Hall & Soskice 2001). These regime differences lead to distinct differences in labour market structure, social policy settings, and exposure to life

course risks. Moreover, both Germany and the UK can be characterized as strong breadwinner states. Country-specific particularities within their respective institutional and cultural orientations lead to differences in the opportunity costs of parenthood, and have different effects on the evaluation of what constitutes adverse or supportive contexts for becoming a parent. It follows that the impact of incomplete labour market integration or lasting occupational insecurity is likely to result in different family formation rationales between these two welfare states, and, within these countries, rationales are different between women and men. Accordingly, the cross-national comparison of the German and the British welfare state will be accompanied by a gender-specific differentiation.

For the international comparison of fertility, I revert to micro-data from the British Household Panel Study (BHPS) and the German Socio-Economic Panel (SOEP) using comparable longitudinal data. The time span considered in the analysis reaches from 1991 to 2005. Hence, occupational patterns can be traced for more than a decade and will be linked to the individual fertility history as well as to supplementary biographical information.

6.2 Theoretical Background

The General Theoretical Framework

I assume that a significant proportion of transitions to parenthood are consequences of a rational choice in interaction with biographical planning processes. As a consequence of this assumption, I apply a framework of purposeful action. According to this perspective, the outcome of a fertility decision depends on the given resources and exogenous constraints as well as on expected utility, the anticipated ability to support a family, the attractiveness of parenthood and the existing alternative paths of action. Family formation in this context can be seen as a major life course goal, satisfying the higher order needs of social approval and (physical) well-being (see Lindenberg 1990a; 1991; Lindenberg & Frey 1993). In this sense, and according to a *social production function* approach, family formation and a focus on a the pursuit of a career provide alternative means of attaining such higher order goals. Nevertheless, family formation and career focus as intermediate life goals can only be substituted to a limited extent, since on one side labour participation in gainful employment is required to maintain a

livelihood, whereas, on the other side, family formation still poses a universal, non-substitutable pleasure in most adult lives (see Schoen et al. 1997: 335; Huinink 2001a: 157).

Family Formation and Occupational Engagement

Particularly among women, the conflict between career aspirations and maternal duties, considering the scarcity of time, leads to an avoidance or at least a postponement of the transition to motherhood, since family formation negatively affects occupational advancement during the early phases of a career (see Brewster & Rindfuss 2000: 282). Nevertheless, as outlined above, family formation also depends on the sustainable provision of economic support, which can only be provided by thorough labour market integration. As parenthood involves a *long-term* commitment, occupational integration plays a key role in providing a reliable and lasting source of familial backing. While welfare state support can partially compensate for a lack of occupational integration, implicit norms strongly encourage the formation of an economic fundament prior to family formation (see Oppenheimer 1988; Hobcraft & Kiernan 1995). Moreover, for women, a sound occupational integration before childbirth also increases the labour market opportunities after a birth-related leave, and thus serves to maintain economic independence. In that sense, the actor's choice of whether to focus primarily on family formation *or* an occupational tenure is not simply a choice between alternatives. Rather, a minimum level of occupational achievement is in fact a prerequisite to starting a family (see Aaberge et al. 2005: 132). Yet, pursuing a career as part of labour market integration drastically reduces individual time budgets, whereas available time is a prerequisite for family formation. This background creates a conflict between time and economic endowments as scarce resources (see Easterlin 1976).

One solution for this conflict could be the specialisation among partners. Societies, in which traditional gender roles are dominant, particularly encourage a gender-specific division of labour, with the woman focusing on domestic and parental duties and the man focusing on a breadwinner role (see Becker 1993). However, where institutional orientations ignore individual aspirations, particularly in the case of young women who have invested in training and education, the re-location of women to traditional carer roles aggravates the conflict between work and family rather than alleviating them (see McDonald 2000).

In front of this backdrop, occupational insecurities and discontinuous employment patterns tend to undermine a swift and reliable labour market integration. The manifestation of occu-

pational insecurities like unemployment, fixed-term contracts, and more generally, insecure labour market prospects hamper a stable economic backing for family formation. Where occupational integration remains incomplete, family formation adds an additional burden on the effort to translate skill investments into a stable and rewarding occupational position. Women who have obtained a high amount of human capital in particular strive to transform educational investments into *safe* labour market positions. Such a strategy not only provides an economic basis for family formation but also serves the need to establish economic independence in societal contexts where an increase in partnership instability would recommend female investments in economic autonomy[148] (see Rindfuss et al. 2003: 414). Furthermore, increasing occupational insecurity nourishes the creation of strategies to curb a family's exposure to economic risk by the promotion of dual-earner couples (see Kreyenfeld 2005a). Yet, the benefit of containing life course risks is opposed to an increase in the price of time for women (see Mincer 1963: 77).

Transferring educational investments into save labour market positions is a high priority in the attempt to avoid a depreciation of acquired skills. Moreover, in contrast to childbearing decisions, career choices are very sensitive to delays, and the refusal of occupational opportunities is often implicitly sanctioned by a reduction in future career options. Accordingly, a sequential ordering of career focus and family formation in the individual biography is predominant in countries where the encouragement of traditional gender roles aggravates female role conflicts (see Sackmann 2000 for Germany). The biographical incompatibility of occupational engagement and parenthood gives rise to a strategy of avoiding biographically binding and irrevocable commitments like parenthood that would undermine career flexibility and options, and that would thus hamper occupational integration (see Birg 1991; Hobcraft & Kiernan 1995).

To conclude the above considerations, the delay of family formation should be closely associated with a greater array of occupational options, an association, which is particularly pronounced among persons with a higher level of education (see Blossfeld & Huinink 1991). Accordingly, high-skilled individuals exhibit a closer attachment to the labour market and a more deliberate focus on career-building. In contrast, women with less education in particular might

[148] This is particularly important for Germany women, where an institutional regime that otherwise profoundly protects from life-course risks encourages a female retreat from the labour market, and thus aggravates risks of

tend to compensate for occupational insecurities with a focus on the homemaker role and the transition to parenthood in order to diminish contingency in the life course (see argumentatively Friedman et al. 1994; see also Chapter 5). Moreover, precarious employment tends to curtail the chances of gaining social esteem through occupational achievement, thus fostering rationales that attempt to compensate for this status loss by trying to gain social approval through the role as a parent (see Tölke & Diewald 2003). Yet, particularly among men, an incomplete integration into the labour force also signals a reduced ability to sustainably support a family (see Golsch 2004: 41). Hence, different patterns of coping with occupational insecurities and risks seem to distinguish not only women with lower and higher levels of education but also women from men in general (see Mills & Blossfeld 2003: 208ff.) This is particularly relevant because women today are increasingly confronted with similar demands as men in education and the labour market, while the prospect of parenthood still places a greater burden on women, particularly in the institutional contexts of strong breadwinner societies (see Lewis & Ostner 1994; England 2005; Fuwa & Cohen 2007) .

A Life Course View on the Link between Labour Market Entry and Family Formation

Life course research conceptualises emerging biographies as a sequence of interlinked trajectories. Employment occupies a central position in this concept, and the timing of vital transitions is closely related to the structuring effect of welfare state institutions (see Mayer & Müller 1986; Mayer & Schoepflin 1989; Mayer 2005; see also Section 4.6). Leaving the family of origin, founding a new household, finishing education, labour market entry, marriage and the transition to parenthood are examples of status passages that initiate central life course stages in modern societies. Additionally, age and sequence norms specify when certain status passages have to be initiated or completed and the sequence, in which passages should be interconnected (see Levy 1996). Such transition norms are affected by predominant transition patterns, which are subject to welfare state structuring. However, while such institutionally defined status passages become increasingly variable, certain regulations still define specific boundaries for choices in individual life courses. This is the case, for instance, where implicit or explicit time schedules exist for educational transitions that also affect the timing of latter transitions like the one to becoming a parent.

---

economic dependence after union dissolution (see DiPrete 2002; Neyer 2003).

Nevertheless, the contemporary life course is considered to have lost much of its binding power in the process of de-institutionalisation (see Kohli 1991). The original, ideal-typical concept of a predictable and standardized life course as an institution assumed that central life events occur in an almost fixed sequence, essentially relying on a *tripartitioning*, centred on working life (see O'Rand 1996b: 7). According to this view, the *life course regime* imposes a tight corset of rules and obligations, while simultaneously providing reliable scripts, thus minimizing biographical risks and contingencies (see Kohli 1985, Kohli 1991). Vital status passages in the life course are considered to result in a narrow sequence of events. In particular, this pertains to the exit from the educational system, entry into the labour market, marriage, and childbirth. Yet, the standard life course has become a fragile concept. Labour market entry and integration have become more precarious and unreliable endeavours. Sequences of central life trajectories today show more variation – both with respect to the timing within the life course as well as among individuals – while the ideal of the nuclear family, with the centrepiece being a life-long monogamous dyad, has been replaced by a high prevalence of successive living arrangements during the life course.

To what extent reliable life course scripts still determine the close linkage of status passages has been addressed by Brückner & Mayer (2005) for Germany. The authors note that, while education to work transitions remain closely linked to institutional scripts, family formation not only tends to be more delayed but also more loosely coupled with occupational transitions.

> "In sum, the course of more than 30 years [since the 1970s] gave rise to a number of different macro-social and macro-economic conditions that are widely believed to have had strong impacts in making life-courses less conventional, less standardized, less collectively patterned, less predictable and more exposed to risks both in the public and in the private sphere." (Brückner & Mayer 2005: 31).

Institutional Regimes and the Mediation of Life Course Risks

An examination of the underlying causes of these developments shows them to be closely related to the orientation of institutional regimes. In this context, extensive protection from life course risks results in more reliable patterns of central life course sequences (see Mayer 2005). Where economic security depends less on individual performance, and where welfare state intervention provides more predictable occupational prospects, family formation is more

likely to be linked to the general transition to gainful employment rather than being delayed until key career positions have been attained.

Coordinated market economies like Germany encourage high trust relations in actor-firm interaction. The institutional arrangements foster long-term occupational relations, where firms are encouraged to train their staff on the basis of tenure tracks that provide a high level of reliability in the life courses of employees. In contrast, liberal market economies like the UK favour the deregulation of market relations. Legal barriers to hiring and to laying off staff are low, and both employers and employees focus on short-term maximisation of income, rather than on the establishment of long-term relations (see Hall & Soskice 2001). While this exposes the individual to extensive economic risks of poverty in cases where the liberal welfare state provides only minimal support, the threat of long-term social exclusion is contained by high labour market turnover and thus represents only a moderate threat of lasting exclusion from work (see DiPrete 2002). Yet, this endows adult life courses with a high level of economic insecurity and precariousness. Where job changes are frequent and where reliability in occupational trajectories is low (see Riley, Kahn & Foner 1994), actors have to cope with instability and looming economic risk by thoroughly integrating into the labour market prior to family formation. Since the duration of this process is likely to show wide variation among individuals, depending on educational attainment and career focus, the transition to parenthood should be linked only loosely to labour market entry, and depend instead on individual performance. Therefore, one would anticipate that female labour market attachment would be pronounced in a liberal market economy as occupation-related norms generally demand labour market engagement, with individual skill endowments being the key indicator rather than gender. Moreover, the pronounced exposure to economic risk encourages dual income backing for family formation.

The situation in Germany is characterized by what are generally more predictable and stable life patterns. However, in recent years, a tendency towards deregulation in industrial relations has been noted, and an according insecurity in life courses has been pervasive. While the origins of this trend date back to the early 1990s (see Mills & Blossfeld 2003; Erlinghagen & Knuth 2004), convincing evidence for increased flexibility and mobility in occupational patterns is limited to the latter half of the decade (see Diewald & Sill 2004). The interesting question is how this decrease in reliable and, more importantly, predictable patterns of occupational relations translates into family formation behaviour in a society that was formerly

characterized by a comparatively high level of economic security and stability in individual life. A key issue to be addressed in the empirical analysis is whether this increasing occupational insecurity tends to leave family formation behaviour largely unaffected, or whether the advent of precariousness in industrial relations has had a significant impact on the likelihood of making long-term commitments. This question is particularly interesting since the change has occurred in an institutional context where actors were socialized to expect comparatively high levels of stability and security.

Theoretical Conclusions & Hypotheses

The above elaboration illustrates a context where increasing occupational insecurity tends to hamper family formation by evoking bleak occupational prospects, thus undermining individual needs for security and protection. While occupational prospects are mediated by individual skill endowments and labour market conditions, the need for economic security is affected by the general level of institutional protection, and by the deviation from accustomed and familiar levels of previously provided security. In this context, family formation might be postponed until labour market integration is deemed sufficiently reliable, in the sense of providing a reliable basis for supporting a family (see Aaberge et al. 2005: 138). Moreover, the timing of family formation is most likely also oriented around avoiding its interference with further career aspirations. This is particularly important for women who, in both the UK and Germany, still shoulder most of the burden of parenthood, and for whom work and family are still essentially competing domains – particularly if they have a higher level of educational attainment (see Blossfeld & Huinink 1991).

Yet, the institutionally mediated opportunity structure for women is different in Germany and the UK. In Germany, comprehensive maternity protection and reinstatement rights broadly inhibit the depreciation of human capital investments; in the UK, on the other hand, the transition to motherhood remains largely unprotected from occupational risks and coercions. Hence, a focus of the following analysis is on how actors behave under the *sustained* impact of precariousness in one's working life. The crucial question in this context is whether clear indications of incomplete labour market integration effectively shift status aspirations towards the private domain, speeding up the transition to parenthood, or whether such indications rather foster the delay of family formation due to their association with an undermined ability to provide economic backing for parenthood.

Finally, the research question of this study addresses the issue of whether an initial labour market integration, one deemed sufficient for family formation, can be associated with specific spans of time since entering the labour market. That is, to what extent does the mere fact of a *transition* into gainful employment provide a notion of readiness for family formation? In contrast, preparedness for parenthood might be solely associated with individual labour market performance – indicated by income levels, occupational status, or entry into standard patterns of full-time employment, regardless of the amount of time since leaving education.

The following hypotheses summarize the theoretical arguments outlined above:

H1: Transition Pattern Hypothesis: A key step toward parenthood is the completion of full-time education, and entry into the labour market. A close temporal link between the entry into the labour market and transition into parenthood should be dominant, widely regardless of occupational security or labour market performance. This should be a particularly strong pattern in Germany, where welfare state support provides better protection of families from economic risks than in the UK.

H2: Gender Role Hypothesis: For women, parenthood and employment are competing life-domains, each of which require dedication and a significant investment of available time. The stronger the integration into the labour force, the greater a woman's reluctance to start a family. For men, thorough labour market integration should encourage the transition to parenthood as this complies with breadwinner norms, which are culturally embedded in both Germany and the UK (see Lewis 1992).

H3: Economic Prerequisite Hypothesis: Labour market integration primarily functions in establishing an economically independent household. The transition to parenthood is delayed (only) until a minimal threshold of occupational integration guarantees economic backing of a family (see Oppenheimer 1994).

H4: Risk Avoidance Hypothesis: Family formation is delayed in contexts of incomplete labour market integration and occupational insecurity. This is not only the case because actors try to establish a sound economic basis prior to family formation, but also because family formation requires dedication, thus further hampering occupational flexibility and threatening occupational establishment in the near future in addition to long-term career options. H4a: This context for postponing parenthood during precarious employment situations is generally pronounced in the UK, since welfare state protection from eco-

nomic risks is limited. H4b: This context is particularly pronounced in Germany in the second half of the 1990s and later, since increasing risks and occupational insecurities violate accustomed patterns of (occupational) stability and security.

H5: Female Career Aspiration Hypothesis: Among women with career aspirations, family formation is delayed until a labour market position signals that family formation will not hamper occupational reintegration and that a depreciation of human capital remains limited. Such a safe status should generally be reached faster in Germany, where a high level of maternity protection repels at least some occupational disadvantages associated with motherhood – at least among already working mothers. In this context, occupational insecurities should generally foster a delay of the transition to motherhood among women with a higher level of education, who will try to bolster their educational investments with a rewarding occupational position. In contrast, given occupational insecurities, women with a lower level of education will focus more quickly on the family domain, particularly where a male earner economically backs family formation.

6.3 Labour Markets and Social Policy Settings in Germany and the UK

This section will provide a brief sketch of some of the structural and institutional particularities characteristic of the basic arrangements that dominate in Germany and the UK. For an in-depth discussion, refer to Section 3.3 & 3.5, and particularly to Section 5.4.

Labour Markets and Associated Policies

With respect to labour market structure, one of the most prominent differences between Germany and the UK is the fact that the British labour market is widely deregulated, resulting in a rather rigid structure with high levels of insecurity. However, a flourishing economy and flexible labour market structure led to particularly low unemployment rates in the UK at the end of the 1990s (see Figure 20a), whereas unemployment rates in Germany rose to comparatively high levels during that time. Unemployment risks generally reflect occupational insecurities and the risk of economic dependence. These insecurities have become particularly pronounced in Germany with almost 50% of all unemployment being long-term in the second

half of the 1990s. This corresponds to a general increase in discontinuous employment patterns and occupational insecurity in the German labour market in the second half of the 1990s (see Diewald & Sill 2004; Tölke 2004; for more details refer to Section 5.4.2).

Figure 20a: Unemployment Rates in Germany and the UK 1984 – 2006

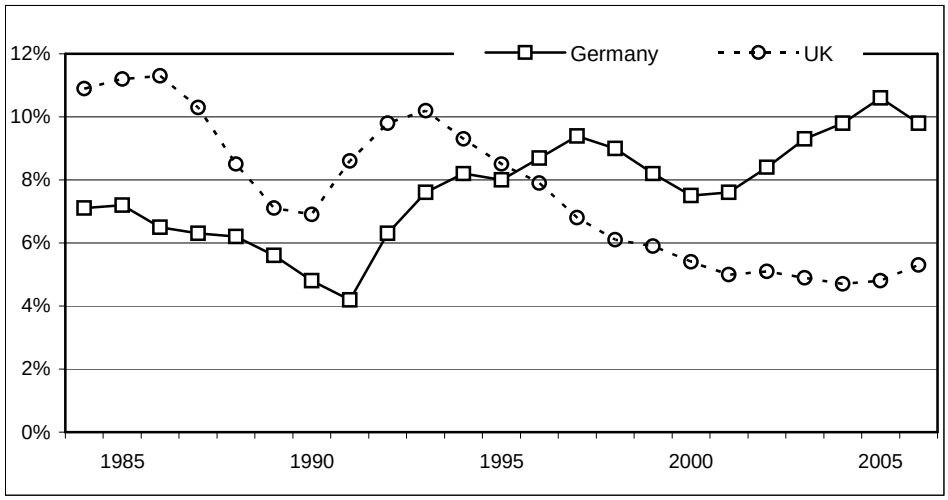
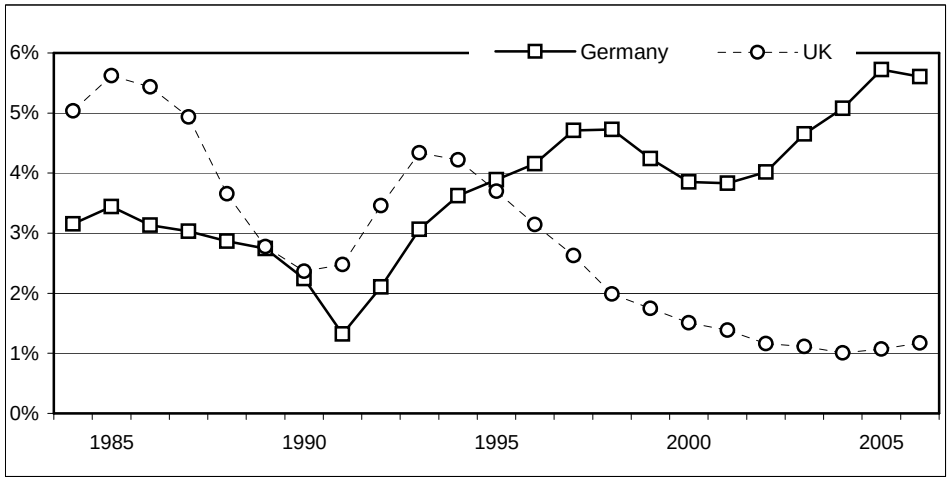


Figure 20b: Long-Term Unemployment Rates in Germany and the UK 1984 – 2006



Source: SourceOECD Employment and Labour Statistics (2007b). Online database.
Note: Long-term unemployment is defined as continuous unemployment of one year or longer.

Of special importance for our topic are the transfers and benefit systems that may possibly mitigate the effects of a disadvantageous labour market performance and enable the individual to perform the transition to parenthood, even if they have unpromising occupational prospects. The social policy settings in Germany and the UK stress different forms of solidarity as well as different institutions (see in detail Neyer 2003; Mayer 2004). Germany encourages private solidarity by strengthening nuclear families. Importantly, social policies in general,

and family policies and taxation in particular, encourage a traditional division of labour with a female focus on the carer role (see Lewis & Ostner 1994). In general, there are generous levels of social support with profound protection from risks. However, a broad range of transfers are linked to current or previous labour market status (commodification; see Esping-Andersen 1999). This excludes the female carer from key elements of social support, and nourishes female dependence on a male breadwinner. That outlines an institutional context, which – while offering a high degree of protection – exposes women to the central life course risk of economic and social dependence (see DiPrete 2002). The result is a strong incentive for women to participate in gainful employment – not only to transfer their increasing skill investments in occupational status positions, but also to ensure eligibility for social support in order to protect against basic risks in the life course. In contrast, the UK addresses men and women relatively equally in terms of benefit eligibility and also through individual-centred taxation. However, by providing in general only a low level of social support, the liberal British welfare state wards off only the most severe risks and hardships.

Unemployment insurance benefits in the UK are means tested and payments are rather low. In contrast to Germany, there is also no unemployment assistance in the UK. Instead low level social assistance payments, which are means tested, based on family income and a partner's employment, set in after six months. In comparison to these payments, unemployment assistance benefits in Germany (until 2005) are generous, while also lowering granted benefits compared to the amount of insurance benefits (see MISSOC 2004, 2006). Yet, these transfers in Germany represent significant payments, whereas assistance benefits in the UK decisively curb household income, exerting a high incentive to quickly re-enter the labour market, while seriously hampering the ability to support a family. For couples who are as yet childless, this most likely serves as a central disincentive in the decision for a child (for an overview see Chapter 5, Table 15 p.218).

In Germany, an extensive vocational education system generally encourages investment in occupational skills. Moreover, firms are also institutionally encouraged to invest broadly in employee training measures (see Hall & Soskice 2001). However, they do so with focus on specific job profiles, focusing particularly on already skilled workers. In contrast, low skilled workers or employees, whose vocational investments have become obsolete are exposed to high risks – not only of job loss but also of pronounced difficulties of regaining a job after becoming unemployed, which is also reflected in the high rate of long-term unemployment in

Germany. Governmental retraining schemes have only a limited ability to contain these risks, given recent changes in the labour market and the forces of globalization (see Mills & Blossfeld 2003; Blossfeld et al. 2005). While the UK is generally confronted with similar problems, and governmental training schemes are only rudimentary, many of the associated risks of precarious employment, and particularly long-term unemployment for low skilled workers, are contained by the generally low unemployment rate and a high rate of labour turnover.

Family Related Policies

Family policy transfers in Germany combine generous child-related benefits with protective maternity leave arrangements that do not involve an imminent commitment to return speedily to work (see Ondrich, Spiess, Yang & Wagner 1999). Reinstatement in the previous job is guaranteed by legal rules for a duration of three years[149]. Both father and mother are eligible for taking leave; however, in practice the homemaker role is largely assumed by mothers, with only a marginal percentage of the fathers taking part of the leave. These arrangements are flanked by a rather limited supply of child- and day-care institutions, which renders a reconciliation of work and childrearing a difficult task. This package of financial aid, a taxation system that favours single-earner families (see Apps & Rees 2003), and limited childcare support encourages women to retreat from the labour market and thus favours the male breadwinner model (see Pfau-Effinger 1996: 479). It can be concluded that this combination of parental leave schemes, child-related benefits, and taxation reinforce a view of German social policy as one that cultivates the traditional division of labour. Germany, therefore, produces a rather strong incentive for at least one of the partners to stay away from the labour market, which – given female discrimination in the labour market and the tailoring of family-related benefits to single earner spouses – is usually the woman. Hence, the decision to perform the transition to motherhood in Germany has a high likelihood of establishing strong dependencies on a male breadwinner. However, the profound occupational protection associated with leave regulations could also function in encouraging family formation, even with an incomplete labour market integration. Yet, in practice, these regulations of prolonged leave encourage a female retreat from the labour force or at least a reduction of occupational engagement to part-time work after childbirth.

149 Some jobs however are not covered by this rule, including especially short-term contracts or freelance work.

In the case of the UK, parental leave protection only covers a short time span of 13 weeks (in addition to maternity leave schemes, specified in Table 23). Transfers related to general parental leave schemes are not available. Overall, family-related transfers in the UK are clearly limited. Regarding child- and daycare supply, the UK follows the principle of encouraging diversity and dynamics in a widely privatised system (see Mahon 2002: 354). Although a limited amount of financial aid for childcare is available, the costs of childcare for working parents remain among the highest in the EU (see Bradshaw & Finch 2002). Just as in the UK, German parents face increased costs when relying on external childcare, a situation aggravated by the generally low level of childcare coverage, especially in the Western part of Germany.

Table 23: Leave Regulations and Family Related Subsidies in Germany & the UK until 2005

	Maternity & Paternity Leave		*Net wage Replacement %* [5]		*Additional Parental Leave*	*Child Allowance*
	Maternity	Paternity	Maternity	Paternity	Leave & Subsidies	(1st child)
UK	6 weeks+ 12 weeks	*Since 2003:* 2 weeks[2]	90 [1] 115€/week[1]	108€/week	*Since 1999:* 13 weeks (unpaid)	105€ flat/month Tax benefits
Since 2004:	6 weeks+ 46 weeks		90 [1] 142€/week[1]			767€ lump sum w. childbirth[3]
D	14 weeks	None	100 / 13€/day max.	-	3 years; flat rate for 2 years (307€/month, means tested)	154€ flat/month Tax benefits

(1) Statutory Maternity Pay. Means tested option of Maternity Allowance (115€/week, for 18 weeks).
(2) Statutory Paternity Pay, introduced 04/2003.
(3) Sure Start Maternity Grant, means tested.
(4) No specific grants for single parents.
(5) Specific parental leave payments apply for non-working persons in Germany.
Sources: MISSOC 2002,2004;2006.

In summary, both the UK and Germany constitute traditional breadwinner countries. However, in a direct comparison of the two, the UK has progressed further in fostering egalitarian gender roles, which is reflected in individual taxation, support of female economic autonomy,

and the recent strengthening of male contributions to childcare through introducing a paid paternity leave in 2004[150].

Nevertheless, though female labour market attachment today is deeply entrenched in both countries, ranking among the highest in the EU (see Figure 18 on p.243; Appendix of Chapter 5), these countries also show extraordinary high levels of female part-time work (see Table 7, p.38). This is above all an indicator of work-family conflicts that lead to a restriction of female labour market engagement after childbirth (see Trzcinski & Holst 2003; Zollinger-Giele & Holst 2004). The underlying causes of this are pronounced norms of maternal care (particularly in Germany), combined with an underdeveloped childcare infrastructure. Childcare supply is characterized by either low coverage (particularly in West Germany), or the high costs of a privatized childcare system in the UK, which is rarely affordable for couples in low paying jobs. The consequence of the outlined context is a pronounced reluctance to enter parenthood, particularly among with women with high skill endowments who have not yet consolidated their educational investments in a stable occupational position.

Concluding this discussion of background influences, the institutional context in both the UK and Germany aggravates work-family conflicts for women, and thus influences childbearing decisions. In this context, Germany on one side provides a more traditional institutional orientation that increases female burdens, while the UK shows slight tendencies toward a more egalitarian division of labour and a less pronounced encouragement of the female caretaker role. Nevertheless, the same family support and leave protection that encourage a female retreat from the labour force in Germany, could also serve as an incentive to start a family, since parental leave and reinstatement rights provide a profound protection, even where occupational integration remains incomplete.

[150] Note that the described context focuses essentially on the time of analysis 1991–2005. Changes in family policy arrangements beyond this time span, or recent changes in labour market policies will not be considered specifically, due to difficulties of an appropriate consideration of their impact, given the short time of observation. This also applies with respect to the German labour market reforms (Hartz I – IV), introduced 2003-2005.

6.4 Data and Methods

The discussion above outlines an institutional context where the burden of reconciling the demands made by gainful employment and parenthood are widely left to individual actors, and to women in particular. The prevailing delay in family formation shows that actors try to achieve compatibility of these competing life-domains through an adjustment in the timing of parenthood. Accordingly, Brewster and Rindfuss note that this "…brings us back to the dynamics of the fertility-employment relationship and the importance of incorporating time into conceptual as well as statistical models" (2000: 291). Hence, a longitudinal design will be an integral part of the following empirical investigation.

Data Basis and Utilized Indicators

The data facilitated for the empirical analysis is based on the British Household Panel Study (BHPS) as well as the German Socio-Economic Panel (SOEP). The BHPS started in 1991 while the SOEP was initiated in 1984. Both panels are representative household surveys covering over 9,300 households and more than 16,500 individuals in the case of the BHPS and over 12,600 households and more than 23,800 individuals in the case of the SOEP (year 2002). Both surveys provide longitudinal data and offer a high level of comparability, making them a good match for a comparison between Germany and the UK.

To investigate the influence of labour market integration on *family formation*, I consider solely the transition to *first*-parenthood[151]. For both the BHPS and the SOEP an extensive fertility and employment history is available, providing reliable demographic information on the fertile history of both men and women[152]. Among the various indicators, the extent of labour market integration and performance rests in the centre of attention. I analyse the time since labour market entry and the duration of continuous employment. An index of overtime work

[151] The timing of second and further births is closely associated with the timing of the first birth (see also Kreyenfeld & Huinink 2003). Most mothers show a tendency to place subsequent births in close sequence with the transition to parenthood in order to compress labour market absence and high parental burdens in a narrow time span. This results in an increased probability of childbirth if parents already have a young child (see also Chapter 1 for the outline of a theoretical and empirical focus on first-birth transitions in the study at hand).

[152] However, in case of the SOEP the birth biography for men only starts with panel members entering in 2000 or later. For father-child relations of men that entered the panel before 2000, the fertility history needs to be reconstructed by observing the household structure in the previous waves. This approach causes a slight bias in

in relation to working hours signals not only constraints in time budgets but also serves as an indicator of occupational attachment. Various measures of occupational activity serve to indicate discontinuous or fragile employment patterns. This includes part-time employment, fixed-term jobs, and unemployment. Moreover, occupational upward and downward mobility during the last year is considered an indicator of job performance. Additionally, regarding the entry into the labour market, I take into account if the first job is adequate of individual educational achievements, or if the initial labour market position rests below or above the level of skill endowments (see also Tölke & Diewald 2003).

The further set of covariates includes net personal income[153] (among others as indicator for economic backing). Transfer reception is considered, assuming that this not only further describes the economic situation but also signals economic dependence. Educational attainment will be determined by considering the highest completed school certificate. Furthermore, vocational education and university degrees will also be considered. The importance of having children in the future and the importance of having a good job will also be considered as indicators of biographical goals. These items might further reflect the internalisation of social norms and thus display preference patterns and the preferred means of attaining social approval and well-being.

An important element of the empirical model is the supplementation of individual data with partner data. The decision for or against having a child is, in almost all cases, made by both partners (see Thomson & Hoem 1998). Thus, the resources and situation of both partners have to be taken into account when calculating the probability for the transition to parenthood (see Klein 2003). Furthermore, the resources of the partner, especially the working income, can be comprehended as a form of bargaining power when important decisions have to be met.

---

case of first-born children who no longer live within the same household like the father (see also Chapter 5.5.2). When considering if a person is already is mother or father, I only consider biological children.

[153] For the UK, only gross income is available. This leads to a bias due to the inability to consider the redistribution effects through taxation. However, while this redistribution remains limited for this liberal welfare state, the individual taxation in the UK incorporates no (implicit) redistribution among spouses as is the case in Germany, where a sole consideration of gross income would introduced a much more severe bias in the gender-specific estimates (see Apps & Rees 2005; Wrohlich & Dell 2005).

Design of the Multivariate Model

As in Chapter 5, I focus on the *transition to first birth* in the context of labour market behaviour, or to be more exact, on the *time of deciding to have a first child*. Hence, the design of the empirical analysis as well as the applied statistical model widely resembles the procedures applied in Chapter 5. This section will provide a brief outline of the multivariate model, whereas a more detailed outline can be found in Section 5.5.3.

The focus on the population at risk requires the exclusion of persons who are commonly inhibited from having a child due to their age. Therefore, I will only consider adults between 16 to 45 years of age. The key goal is to restrict the analysis to persons who are (still) likely to have a first child, considering social and biological factors (see Chen & Morgan 1991). Correspondingly, both descriptive and multivariate findings are based on characteristics of cohorts from 1956 to 1985, observed between 1991 and 2005 (relying on data from 1990 to 2006).

The transition to first birth as a *dependent variable* is significantly related to parental age. In approximating the time of the decision for a child, I backdate the time of birth by 10 months[154]. As the underlying forces that drive fertility decisions vary across age groups, I apply *an exponential hazard model* with the extension of *piecewise constant* estimates. In this model, the estimates distinguish between time intervals with variable hazard rates. "The basic idea is to split the time axis into time periods and to assume that the transition rates are constant in each of the intervals but can change between them" (Blossfeld & Rohwer 1995: 110).

Although available data provides discrete measures, while the exponential model relies on a continuous time scale, the average duration of the spell until an event occurs (more precisely, a first birth) is several years. As I base my analysis on a monthly measure of the dependent variable and central covariates (particularly the recent employment history, taken from the calendar of activities in SOEP and BHPS), this can be considered a justified approximation of continuous time data (see Jenkins 2005: 19f.).

In the applied analysis, the piecewise-constant intervals approximate a normal distribution with a summit around the 30th year of life, where the probability for having a first chid is highest. In detail, the selection of the piecewise constant intervals is based on a hazard rate analy-

[154] Evidence on conception probabilities, derived from various medical studies suggest that the proportion of couples, not able to conceive within two to three cycles is in fact very small, which underscores the validity of this procedure of backdating (see Bongaarts 1982).

sis (see Section 5.5.3 & Figure 16 for more details; first-birth analyses on basis of SOEP and BHPS data provide similar hazards, not least because the ECHP also relies on SOEP and BHPS data).

I define the risk for transition to the first birth at a given time at a baseline hazard $\bar{\theta}$ varies across age with steps at 16th, 21st, 26th, 33rd and 38th year of life (month 192, 252, 312, 396, 456 after respondent's birth). Time at risk for first-birth conception is defined to start with the 16th year of life, and to end with the 45th year of life (month 192 and month 540)[155]. The regression parameters γ and β refer to the time variant (z) respectively to the time invariant (x) set of covariates, considered in the analyses. Thus, the hazard rate $\theta(t)$ for a first-birth decision is defined as follows:

$$\theta(t) = \overline{\theta_t} \exp\left(\beta' X_t + \gamma' Z_t(t)\right) \tag{1.2}$$

Where t_n defines the time intervals with constant baseline hazards:

$$t \in (193,252);\ (253,312);\ (313,396);\ (397,456);\ (457,540) \tag{1.3}$$

All multivariate results displayed in Table 25 & Table 26 are based on the outlined form of piecewise constant exponential hazard estimates. All findings, both descriptive and multivariate, are based on characteristics of cohorts from 1955 to 1985, observed between 1991 and 2005. In the following section, I will present some initial descriptive results.

6.5 Results of the Descriptive Analysis

Figure 21 for Germany and Figure 22 for the UK show the transition to first birth among both men and women. In Germany as well as in the UK, transitions occur later for men in comparison to women. Moreover, men in both countries show distinctively higher rates of permanent childlessness. These findings of a longer delayed transition to parenthood and a higher pro-

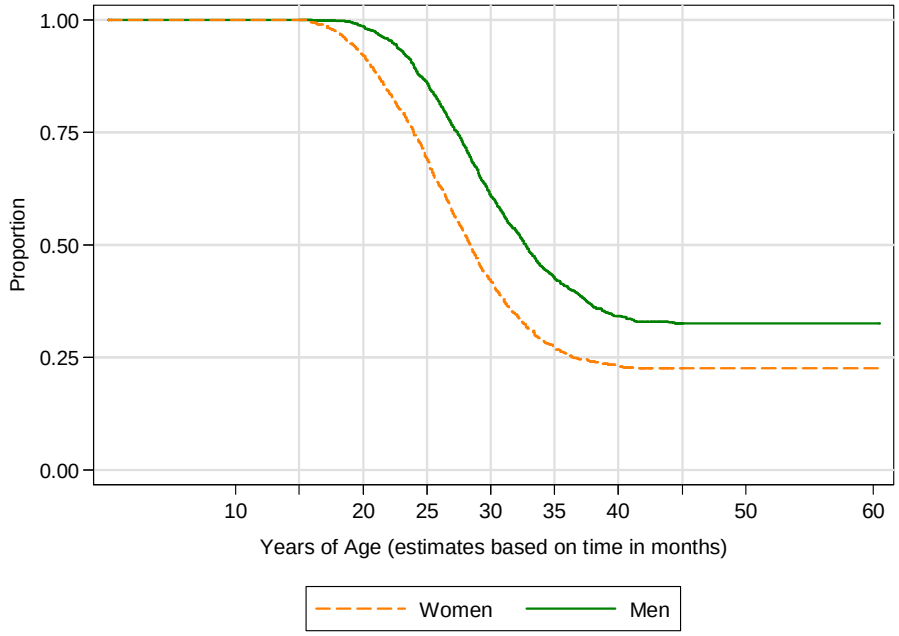
[155] Almost no transitions to first parenthood can be observed beyond this age (see Figure 21 & Figure 22).

portion of permanent childlessness are well in line with results on different countries (see, e.g., Bachu 1996 for the US, Juby & Le Bourdais 1998 for Canada, and Toulemon 2001 for France; see also Section 2.1.6). In direct comparison, Germany evidences slightly higher levels of permanent childlessness. In addition, the transition patterns in Germany and the UK, that is, the age at which a specific proportion of adults has already made the step to parenthood, are similar between these two countries. An exception to this can be found in the high prevalence of teenage motherhood in the UK (see Ermisch & Pevalin 2003). Figure 21 and Figure 22 (both next page) are somewhat limited in visualizing the distinction between Germany and the UK with respect to this issue, since the estimates only consider births that occurred at 16th year of life or later. Yet, the survival estimates show that the proportion of persons that have already become a parent at age 20 is clearly higher in the UK than in Germany, a salient fact with particular relevance to the proportion of teenage mothers (see also Section 3.5).

Within the cohorts 1956 to 1961[156], the mean age at first birth for women is about 24.6 years in Germany and about 25.8 years in the UK. Among men, the mean age at the time of the transition to fatherhood is 26.8 years of age in Germany and 28.2 years of age in the UK. The data for the cohorts 1956 to 1961 suggest that a significant proportion of men and women in Germany undergo a slightly more rapid transition to parenthood than their counterparts in the UK. This observation takes on greater force if one considers the comparatively high proportion of fertility transitions among British teenagers, which should add to a reduction of the average age at first birth in the UK. Yet, the mean age at first birth is *higher* in the UK than in Germany. Moreover, Germany shows higher rates of permanent childlessness, which is well in line with a lower TFR in Germany compared to the UK during recent decades. In particular, the majority of German women undertake the transition to parenthood within a rather limited time span, between ages 20 to 35, whereas the proportion of women that delay the transition to motherhood longer is higher in the UK than in Germany.

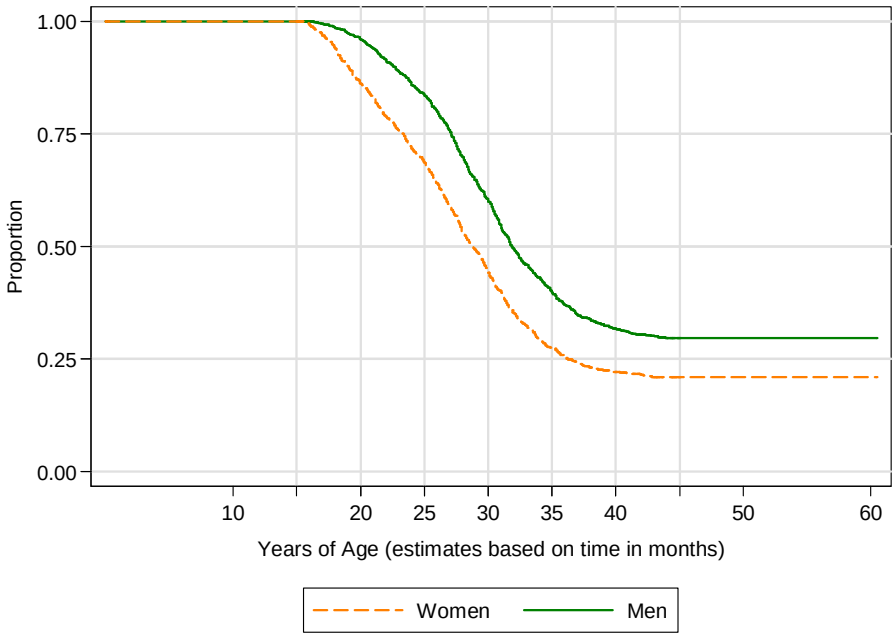
[156] The focus here is on cohorts who have already completed their fertile life-span (1956-1961). These results are based on the GSOEP for Germany and the BHPS for the UK, 1991 to 2005; author's calculations, unweighted.

Figure 21: Kaplan Meier Estimates of First-Birth Transitions in Germany by Gender (Cohorts 1956 – 1985)



Source: GSOEP 1991 to 2006; (author's calculations) *n = 9.895 (events = 2.973)*

Figure 22: Kaplan Meier Estimates of First-Birth Transitions in the UK by Gender (Cohorts 1956 – 1985)



Source: BHPS 1991 to 2005; (author's calculations) *n = 7.461 (events = 2.146)*

Shifting attention from the transition to parenthood to the transition into the labour market, the data show that labour market entry in Germany occurs at a higher age than in the UK. Obviously, the – in a cross-national comparison – long durations, spent for education and vocational training in Germany take their toll: The mean age at labour market entry is 20.7 years (with men entering slightly later than women). In the UK, the entry usually occurs earlier, at a mean age of approximately 19.2 years. The values for the median entry age differ even more (17.3 in the UK versus 20.0 years of age at labour market entry in Germany). These patterns can be particularly linked to the lengthy programs of higher education in Germany, which cause a significant delay in labour market entry compared to the UK, particularly among people with tertiary education[157].

The initial evidence of average age at first birth and labour market entry provides some initial indication that the relation between labour market integration and fertility decisions follows a different pattern in Germany than in the UK: In Germany, the first step into an occupational career is taken later than in the UK. Yet, the transition to first birth, in many cases, occurs at a lower age. The lengthy process of educational and vocational training in Germany combined with what is on average an earlier transition to parenthood can be partially explained by the higher prevalence of first births prior to labour market entry. In Germany 14.3% (12.8% among men, 15.7% among women) of all first births occur before entering into employment, as opposed to 10.3% in the UK (11.4% among men, 9.4% among women). However, this might in part be related to a higher prevalence among German women to focus solely on the homemaker role and to neglect career development. This view is further supported by findings indicating that there is a marked difference in the age of British and German women at first birth before labour market entry, whereas the differential between British and German men is relatively small. Norms of maternal care, as well as social policy settings encouraging a traditional division of labour in Germany, support such gender specialization. In contrast, in the UK the greater exposure to economic risk and the high level of commodification establishes high barriers for women to refrain from professional work.

Figure 23 (Germany) and Figure 24 (UK, next pages) show the hazard rate of transition to first parenthood among those who have already entered the labour market. In both countries

[157] There is empirical evidence that the age at labour market entry drifts apart even further: Haag and Jungblut (Haag & Jungblut 2001) state that the average age at labour market entry has increased in France and Germany,

and among both men and women, the likelihood of starting a family swiftly increases after labour market entry. Particularly among German women, the probability of having a first child increases *very* rapidly after entry into the labour force. The highest degree of risk is reached at about eight years after starting a first job. This result is certainly also influenced by age norms that suggest the transition to parenthood should occur within a specific age range. Yet, the finding of a close relation of labour market entry and transition to motherhood implies that German women in particular focus first on labour market integration and subsequently on family formation. Among German men, the relation between labour market entry and the greater likelihood of family formation is less pronounced, reaching a peak after about 9 to 10 years.

Figure 23: Hazard Rate of First-Birth Risk after Labour Market Entry in Germany by Gender (Cohorts 1956 – 1985)

Source: GSOEP 1991 to 2006; (author's calculations) *n = 8.579 (events = 2.693)*

Among women in the UK, too, the first-birth risk increases markedly with entry into the labour force. However, this relation is less striking than in Germany. The highest likelihood is reached after 11 years and clearly decreases thereafter. This suggests a less pronounced link between the status passage into gainful employment, and the starting of one's own family than is observable in Germany. Yet, as in Germany, this link is more distinct among women than

whereas it has decreased in the UK and the USA.

among men, which suggests that family formation follows an initial consolidation of educational investments in professional status positions in order to retain occupational opportunities after childbirth.

Figure 24: Hazard Rate of First-Birth Risk after Labour Market Entry in the UK by Gender (Cohorts 1956 – 1985)

Source: BHPS 1991 to 2005; (author's calculations) *n = 6.884 (events = 2.036)*

6.6 Findings of the Multivariate Analysis

The multivariate analyses incorporate a set of covariates that focus on occupational performance and risks in the context of starting a family. These indicators can be grouped roughly into three types. A first set of indicators attends to the current labour market attachment and economic performance. The indicators in this group include the current activity status and an index measuring the current extent of overtime work. I also consider occupational upward or downward mobility since the previous year and, finally, current labour earnings – all of which define the current economic scope. In a second group of variables, I take into account more *latent* indicators of occupational performance. While certainly some forms of precarious employment – as represented in activity status types like part-time work or unemployment – can be assumed to have a latent effect as well, this group focuses on indicators that most likely

exert a more lasting impact on occupational performance. This group includes occupational performance at labour market entry, an indicator that also takes into account whether the first job requirements were below or above the level of a person's educational attainment. The goal here is to provide insight into whether a person has made a promising or unpromising start in their working life, assuming that this exerts a lasting impact on future career aspirations and opportunities (see similarly Tölke & Diewald 2003). Moreover, in the context of latent occupational insecurity, I consider whether a person has been long-term unemployed (i.e. one year or longer) during the last three years, as this will likely have a pronounced negative impact on both labour market attachment, due to the discouragement associated with unemployment, and also on future job opportunities. A third group of variables focuses on the impact of specific key transitions from education to work. In addition to the descriptive evidence of the development of first-birth risk after labour market entry, I consider in the multivariate models the issue of whether there are any identifiable effects of duration in the transition to parenthood – in the context of time that has passed since leaving full-time education. An additional indicator that focused on the question of whether the step into a first job could be made within a period of twelve months or less did not produce significant findings and therefore was omitted from the displayed results in Table 25 & Table 26.

The Transition to Parenthood in Light of Labour Market Performance

In Germany as well as in the UK, involvement in full-time education exerts a distinctly negative impact on the likelihood of starting a family that is observable for both men and women. This context is well-documented in the research literature (see, e.g., Blossfeld & Jaenichen 1992) and corresponds to prevalent life course patterns in modern societies and in norms that encourage a delay of family formation until a minimum level of economic dependence and support for a future family has been reached (see Hobcraft & Kiernan 1995). In contrast, among those who have already entered the labour force, there are pronounced patterns that clearly distinguish men from women. Moreover, across countries, there are different backgrounds for starting a family that emerge according to whether labour market integration is either extensive or incomplete.

Among men, an occupational position beyond the standard template of full-time work seems to hamper the **transition to fatherhood in Germany**. There, part-time employment shows a negative impact. To a lesser extent, this also applies to economic inactivity among

men. Moreover, the experience of long-term unemployment during the last three years clearly undermines the likelihood of having a first child. Importantly, all these effects vanish after controlling for income (and transfer reception), which in turn exerts a consistently positive impact on family formation among men. This suggests that – as already stressed in Chapter 5 – it is primarily the direct impact of incomplete labour market integration on earngings that result in the inability to meet the requirements of family formation, rather than its signal of lastingly reduced breadwinner ability associated with precarious employment. That is underscored by the finding that none of the mentioned effects remains significant if the backing of a female earner is taken into account.

Shifting the attention to **male transitions to parenthood in the UK**, I find a somewhat different background for how occupational achievement affects this transition. Indicators of incomplete labour market integration – like male part-time employment or fixed term contracts – do not show any significant impact. However, just like among German men, the experience of long-term unemployment hampers the transition to fatherhood. In contrast, a promising labour market entry and a high performance in the first job affect this transition positively. Such a promising job start may serve as an indicator that occupational integration has been completed more swiftly, thus nourishing the ability to support a family. Yet, similar to the analysis of German men, none of these indicators retains a pronounced significance after controlling for a broader set of covariates, including income, transfers, and the backing of a second earner.

Importantly, however, among men in the UK, a second pattern of linking employment and the transition to fatherhood emerges that comes as quite a surprise: First of all, male occupational downward mobility does not hamper family formation as one would expect according to a theoretical framework that considers undermined earner qualities. In contrast, this downward mobility *increases* the likelihood to become a father. This effect is pronounced and remains consistently robust across all estimated models. While it should be taken into account that this could be a methodological artefact, this finding is further supported by evidence of a positive – albeit weaker – impact on family formation during male unemployment (a similar slight positive impact on family formation among British men was already identified in Chapter 5). In fact, this might hint that, when confronted with bleak occupational prospects or a precarious employment situation of the male earner, couples in the UK tend to back family formation with a more pronounced male engagement in childcare duties than predominant

traditional gender roles would suggest. The institutional arrangements in the UK, particularly the high labour market demands on individual actors, combined with the low level of welfare state support for young families, especially with respect to childcare support, would certainly encourage the sharing of parental duties in this specific life phase. Moreover, British men also deviate from the traditional male breadwinner picture by showing a negative impact on family formation if they have a high valuation for occupational prestige (among German men, who widely refrain from engaging in childcare, this indicator is not significant). That is, for men in the UK, as for women, work and family to a certain extent present competing life domains. Finally, planning to have a child with stronger *paternal* engagement might not only serve to disburden a mother who is probably still working, but might also serve to compensate for the loss of occupational status and discouragement through a focus on the family, thus regaining both self- and social esteem.

The 2003 shifts in social policy that encourage paternal care through the introduction of paid paternity leave (see Table 23) come too late to be discussable as a relevant explanation for such behaviour. Moreover, the policy effects are certainly too limited to have induced such a fundamental shift in predominant gender roles in a strong breadwinner country as the UK (see Lewis 1992; Fuwa 2004). However, the introduction of paid paternity leave is perhaps an additional indication of slowly but constantly shifting gender roles in the UK. However, although the presented evidence provides a broadly consistent pattern across several indicators, this issue of a male disengagement from the labour market encouraging to take over carer duties certainly requires more attention in future research before it can be confidently related to an adjustment in traditional gender roles.

Women in the UK who start a family do indeed show similar patterns to men in the context of occupational performance and labour market insecurities. A pronounced labour market integration and a demanding occupational position clearly hampers the predilection to decide in favour of having a child. A high value placed on having a good job and extensive overtime work are both indications of close labour market attachment, whose strong restriction on time is a clear witness to how labour market attachment hampers the transition to parenthood. In contrast to this evidence of pronounced labour market attachment, women in the UK show distinct patterns of placing the transition to parenthood in times of occupational insecurities and precarious employment. The impact of unemployment provides impressive evidence in this direction. In this context, the likelihood of opting for a first child during unemployment is

consistently two times higher. Obviously, women in the UK show a distinct tendency to perform the transition to motherhood when occupational status encourages this behaviour by reducing opportunity costs through the low price of time for family formation. Pronounced effects also link family formation to female part-time employment. This context in the UK, however, provides somewhat vague implications: Part-time employment may be the result of a deliberate reduction of working hours in order to allow for a parallel combination of work and motherhood in an institutional context that discourages a lasting labour market absence by offering only a rudimentary maternity protection and reinstatement rights. Yet again, among other women, lasting part-time employment may signal latent precarious employment and an incomplete labour market integration that is finally answered by shifting the focus to the family domain (for this line of reasoning see also Friedman et al. 1994).

Two major principles of how labour market integration affects family formation become salient among **women in Germany**. First, women with a below average performance at entry into the labour market tend to delay the transition to motherhood. This is perhaps the case as an unpromising job start tends to make an occupational integration a more lengthy and difficult process. At the same time, however it is required to a) transform educational investments into occupational status positions and b) enable a proper labour market reintegration after a maternal leave. This striving for a consolidation of the occupational position prior to family formation is reflected by findings that indicate that the experience of long-term unemployment sometime during the last three years among German women also hampers the transition to motherhood (just like is the case among men). This evidence, however, is not robust in the models that control for income, transfers, and the existence of a second earner; in contrast, precarious employment in the form of having a fixed-term contract exerts a consistently negative impact on family formation rationales. This is not only because fixed-term employment or casual employment is an indicator of an instable and precarious employment career, but also because the eligibility for leave related benefits is limited – at least among some of such contracts. In this context, the institutional arrangements regarding maternity protection and support provide an incentive to attain a minimum level of labour market integration prior to family formation which guarantees eligibility for these types of institutional support.[158]

[158] The tendency among German women to initiate the transition to parenthood from of a safe labour market position is also mirrored in the finding of a positive impact of being in public employment. This type of employ-

In contrast to the coping patterns outlined above, which relate to women with a pronounced labour market attachment, the antagonism between the demands of occupational and family roles under the traditional German breadwinner regime takes its toll. These women with both a high workload and extensive career aspirations, as reflected in a high amount of overtime work and a high importance of having a good job, show consistent and pronounced effects of a lower likelihood to start a family. Generally, among German women, a minimum threshold level of occupation security and integration is obviously *aspired* prior to family formation – both to consolidate educational investments and in order to guarantee transfer eligibility that are linked to occupational status and duration. However, if the labour market attachment is *pronounced*, this tends to hamper family formation among German women. It should be noted that these two principles – either an initial labour market integration as prerequisite of family on one side, or an extensive labour market attachment that turns out to drastically conflict with family formation – is predominant in different status groups. In this context, the work-family conflict turns out to be prevalent among women with extensive investment in educational and occupational skills.

Finally, among women in Germany, there is slight evidence that – like British women – the transition to parenthood is undertaken during times of involuntary labour market exclusion – during unemployment or inactivity (the latter not considered for the UK). The evidence of a higher propensity to start a family among German women, however, remains weak and is related to economic inactivity as well as to female unemployment with the backing of a male earner. Yet, in contrast to the analysis in Chapter 5, the investigation of the population in this Chapter (6) did provide less convincing evidence for German women in that direction.

Key Transitions in the Education – Work – Family Nexus

In the theoretical outline, I have argued that predominant life course patterns might still link the status passages in the education-work-parenthood nexus on grounds of a sequence of vital status passages and notions of how and with which timing these transitions should be interconnected. Brückner and Mayer (2005) in this context argue that a close linking in a way that presents a consistent and dominant pattern of transitions tends to dissolve, where high flexibility dominates industrial relations. In this sense, predominant life course patterns with a

ment commonly signals reliable job prospects, combined with comparatively generous support for parents. This

close temporal linkage of education and family related status passages should be more difficult to identify in a liberal market economy like the UK, where the institutional arrangements, leave the protection against life course related risks to the actors (see DiPrete 2002). This should generate a greater heterogeneity in individual responses to theses settings than under a more predicable pattern as in a coordinated market economy as Germany.

In this context, I have first investigated if a delayed entry into the labour market after the end of full-time education exerts a lasting impact on family formation. In detail, I have distinguished persons who have started a job within twelve months after finishing education from those who did not enter the labour force within this time span. However, this indicator did not produce any latent impact on the likelihood to start a family. Moreover, I have focused on the duration, a person has been continuously in employment (without any educational or unemployment related work interruptions, e.g.) as an indicator of occupational stability and labour market integration. Yet, just like the education to work indicator that also aimed to cover latent fertility effects of difficulties to promote one's initial occupational integration, this measure also did not provide any significant impact on the propensity to become a parent[159].

In contrast, however, prevalent transition patterns still seem to temporally link the exit from full-time education to the *timing* of family formation in Germany, particularly among women. A dummy set of variables, covering the time since leaving full-time education (0 to 3 years, 4 to 6 years, 7 to 10 years, 11 to 14 years, and more than 14 years) was included in the hazard estimates. Among German women, this indictor presents robust evidence of a temporal linkage of these two status passages. The inclination for a first birth increases swiftly with the exit from full-time education and is most pronounced 7 to 10 years after this status passage, with the level of this effect declining thereafter – but remaining statistically significant. This widely corresponds to the hazard rates of an increased first-birth risk about eight years after labour market entry, as presented in Figure 23. These results for German women remain robust, after including the above mentioned indicators of occupational insecurities and precarious employment, and also after controlling for the full set of covariates, including – among others – educational attainment, income, transfer reception and information on the partner.

---

indicator is only available for Germany and has thus been omitted in the results in Table 25 & Table 26.

[159] Different functional forms of this indicator of permanent employment have been tested (e.g. a linear impact and a decreasing marginal utility) but did not provide any consistently significant impact on the likelihood to start a family. This indicator has been omitted in the empirical analyses, presented in Table 25 & Table 26.

In contrast, the link between finishing education and starting a family is more loosely coupled among German men. A recent exit from full-time education even exerts a negative impact, which certainly owes something to the limited ability to support a family immediately after exiting the educational system and in the early stages after labour market entry. A positive impact on the likelihood of becoming a father can be found between 4 to 10 years after finishing education. The effects however remain spurious and vanish after controlling for the full set of covariates. Obviously, the life course pattern, linking these status passages is largely determined by heterogeneous contexts of individual labour market integration and performance. In the UK, the notion of a link between the status passages of leaving education and starting a family appears to be even more hazy. The effects generally remain spurious, and the most consistent effect is a negative impact on the transition to parenthood in the immediate years after finishing full-time education. Even more decisively among German men, the paths towards parenthood appear to be determined by individual occupational engagement and the experience of occupational insecurities instead of being related to a consistently defined life course script that links educational exit, labour market entry and family formation. The picture thus corresponds to the notion that a liberal regime encourages diversity in individual life courses in order to cope with hardships and life course risks, from which a liberal welfare state is only capable or willing to offer protection to a limited extent.

6.7 Conclusion

The investigation of the effects of labour market integration on fertility decisions revealed pronounced gender-specific effects. The specific institutional arrangements in Germany and the UK entail distinctively different coping patterns across countries, particularly in the transition to motherhood. This is the case, even though the evoked contradictions between female work and family roles in Germany and the UK have led to an assessment of both countries as strong breadwinner countries (see Lewis 1992).

The institutional background in Germany still appears to reproduce traditional gender relations, which is also reflected in the ways in which German men and women tend to perform the transition to parenthood in relation to gainful employment. In this context, where women face high incentives to invest in education while simultaneously being institutionally encour-

aged to retreat from the labour force, I find evidence that women tend to delay family formation in a context where they are facing incomplete occupational integration and precarious employment. This is suggested by the robust negative impact observable if working in fixed-term employment or under the negative impact of an unpromising job start. Obviously a sequential combination of occupational career and motherhood (see Lauterbach 1994: 71ff.; Dornseiff & Sackmann 2003) remains a predominant way of coping with the squeeze resulting from occupational role demands and the institutional and normative encouragement of the female carer role. Moreover, such a sequentially-ordered focus on these two respective life course stages allows German women to retain at least a minimal attachment to the labour market by first transferring educational investments into occupational status positions, which also diminishes risks of economic dependence.

Yet, the dominance of traditionally structured family models is also reflected in the fact that couples with an income distribution that features a male main earner show a higher propensity to start a family. This is particularly encouraged by the German taxation system favouring married, single-earner couples (see Apps & Rees 2003; Wrohlich & Dell 2005). Women who retain a pronounced labour market attachment, in contrast, find it difficult to combine their career aspirations with the step to motherhood. Given limited time budgets, strict norms of maternal care, and an underdeveloped childcare infrastructure, it is difficult for such women to combine work and family, which results and an extensive reluctance to start a family.

To conclude the discussion of these findings, the institutionally encouraged male breadwinner / female homemaker template still exerts a pronounced impact on how German men and women shape their transition to parenthood. This is also corroborated by slight indication that – among both men and women – completed education and a stable and rewarding occupational position seem to be a precondition to decide for having a first child, whereas part-time employment, previous long-term unemployment, or lower income levels show a negative impact on the transition to fatherhood. Yet, incomplete labour market integration and occupational insecurities seem to hamper the transition to fatherhood only to the extent that these patterns of precarious employment translate into an income reduction, thus undermining economic backing of a family.

The relation between occupational performance and family formation in the UK differs from the picture in Germany. In the liberal market economy of the UK, the encouragement of

diversity and flexibility in the labour market on one side and the limited welfare state protection against life course risks on the other results in less stable employment patterns and a higher exposure to hardships (see Hall & Soskice 2001). This results in the necessity of establishing a sound labour market position to attenuate economic risk. The necessity of women completing their labour market integration does not so much rely on establishing an occupational basis to return to after a child-related leave, as reinstatement rights in the UK are largely absent. Rather, women in the UK try to realize a parallel combination of the female carer role with occupational participation, as underscored by the distinct positive likelihood to decide for a first- child during part-time employment[160].

A pronounced pattern among women in the UK is to place the transition to parenthood within periods of involuntary labour market exclusion. Particularly unemployment and subsequent inactivity clearly increases the likelihood of opting in favour of a first child due to reduced price of time effects. Some results suggest that even couples where the man becomes unemployed, or is less closely attached to the labour force, tend to use this flexibility in male time budgets to start a family. Perhaps, the high opportunity costs of parenthood in the UK tend to encourage a deviation from the traditional model of family duties, with men taking over a higher share of childcare responsibilities during joblessness, thus disburdening the female earner and fostering the tradition to parenthood. Such a focus on the parental role may also serve to partially compensate for the loss in social esteem after expulsion from the labour market, in a society that places high norms on participating in paid work. Yet, this issue of a reversal of traditional gender roles in case of male labour market detachment requires further investigation in future research and remains speculative for the present time.

To conclude, the most distinct differences arise in the way women in Germany on one side and in the UK on the other shape the transition to parenthood in the context of their labour market participation. While women in Germany pursue at least an initial labour market integration and tend to focus on family formation thereafter, women in the UK obviously try to avoid extensive labour market exits. In this context, patterns of a parallel combination of work

[160] Once again, it should be mentioned that observed births are backdated by ten month to the assumed point of deciding to have a child. It has been pointed out that particularly women in Germany tend to combine motherhood with part-time employment in order to cope with limited time budgets (see Trzcinski & Holst 2003). However, in the case of this analysis for the UK, part time employment is the *starting point* of that decision

and family formation appear to be more prevalent in the UK. Moreover, women in the UK that face an involuntary exclusion from paid work in the shape of unemployment or subsequent inactivity show a high propensity to start a family in such a context that reduces the opportunity costs of parenthood. These different coping strategies are closely related to the different types of institutional arrangements and incentives in both countries. The UK provides a generally low level of welfare state support and protection and leaves precaution to the individuals, while Germany encourages a regress to the female family carer role.

Yet, women with very close labour market attachment show a similar reluctance to have a child in both Germany and the UK. Obviously, the ability to reconcile work and family among women with pronounced career aspirations remains a critical issue. In both countries, female participation in education and in the labour market has shifted from an exception to a rule. However, whereas the German welfare state is focused on supporting single-earner families with a female homemaker, the UK generally neglects the support of young families, particularly in a lacking alleviation of parental responsibilities. Still, both institutional regimes place the burden of childrearing solely upon the shoulders of the woman. In consequence, this fosters either an extensive delay of the transition to parenthood, or a complete rejection of the transition to parenthood, particularly among women with extensive skill investments that are highly capable of competing in the labour market, and aim to do so.

rather than consequence of becoming a parent, which suggests that at least some women take advantage of this incomplete labour market integration in order to start a family.

6.8 Appendix

(A) Descriptive Statistics

Table 24: Sample of Respondents – Selected Descriptive Statistics

Descriptive Statistics (all values in percent)	***Germany***		***United Kingdom***	
	Men	**Women**	**Men**	**Women**
Birth Cohorts				
1956-1965	15.3	11.7	18.49	14.7
1966-1975	45.4	40.2	40.4	40.0
1976-1985	39.3	48.0	41.1	45.3
Partnership Status				
Single / Living Apart Together	66.0	57.4	66.2	58.5
Consensual Union	17.8	23.2	18.5	22.6
Married	11.2	15.1	15.4	18.9
Educational Attainment				
University Degree	11.5	11.4	24.5	26.6
A Level	18.5	21.7	38.6	40.8
O Level	31.4	35.6	23.6	24.0
Complimentary Schooling	32.2	24.2	12.7	8.3
Activity Status				
Full-time & Permanent Contr.	40.7	37.0	61.3	57.2
Full-time & Public Employment	3.4	2.7	n/a	n/a
Full-time & Fixed Term Contract	5.9	6.7	5.4	6.1
Part-time Employed	1.7	4.6	1.6	2.6
Self-Employed	4.1	1.7	6.6	2.5
In Education/ Apprenticeship	31.3	35.3	13.6	18.6
Unemployed	6.6	4.4	7.9	4.9
Economically Inactive	1.9	5.6	n/a	n/a
Retired / Other / Missing	4.4	2.0	3.1	4.1
Partner Unemployed Inactive?	4.1	2.5	6.0	4.0
Occupational Mobility since previous Year				
Downward Mobile	5.0	4.2	10.5	9.9
No Change	39.4	40.3	28.4	33.0
Upward Mobile	5.8	5.1	13.3	13.0
Performance at Labour Market Entry				
Below Edu. Level/Weak Performance	12.9	14.7	13.3	9.0
Appropriate for Edu./Average Performance	53.5	49.0	43.2	43.6
Above Edu. Level/Good Performance	6.3	4.2	5.8	5.3
Long-Term Unemployed in last 3 Years?	4.1	2.5	7.7	4.7

Table 24 continued on next page…

Table 24 continued…

Descriptive Statistics	***Germany***		***United Kingdom***	
(all values in percent)	**Men**	**Women**	**Men**	**Women**
Time Since leaving Full-Time Education				
Still in education	31.6	35.5	8.7	12.3
1-3 Years	19.4	20.6	18.9	21.8
4-6 Years	13.1	13.2	19.0	20.2
7-10 Years	12.8	11.5	18.6	17.7
11-13 ½ Years	8.0	6.3	11.1	10.4
More than 13 ½ Years	13.7	11.3	24.1	18.2
Work-Family Priorities				
Importance of having children low	35.0	29.3	19.3	20.8
Importance of having children average	25.3	24.6	33.0	28.5
Importance of having children high	10.7	16.9	24.2	33.3
Importance of good job low	7.9	9.0	23.3	17.3
Importance of good job average	36.4	36.8	22.8	23.6
Importance of good job high	27.1	22.6	52.8	57.8
Relative Income (Persons with Partner only)				
Similar Level	24.8	25.2	31.5	32.6
Traditional (♂ 1/3 above ♀)	42.6	37.8	44.0	37.1
Fem. Main Earner (♀1/3>♂)	16.2	20.6	15.9	22.4
Both not working	11.7	12.4	8.6	7.9
n of person-months	392.599	314.025	273.949	221.248
n of cases	5.225	4.508	4.014	3.318
n of births (backdated) 1991-2004 / 2005	1.319	1.493	956	1.062
n of cases / events Partner(Model III)	2.563/1.099	2.659/1.168	2.034/860	1.940/882

Source: GSOEP 1991 to 2006 for Germany & BHPS 1991 to 2005 for the UK; (author's calculations).

(B) Piecewise-Constant Exponential Hazard Estimates on First-Birth Risk

Model Description:

Model I: Indicators on current as well as latent labour market performance & precarious employment (incl. unemployment, inactivity, fixed-term job, duration of continuous employment, time since leaving full-time education, index of overtime work).
Backdating of birth to (t_{birth} – 10 months).
All adult respondents of cohorts 1956-1985, aged 16-45.

Model II: Indicators on current as well as latent labour market performance & integration
Backdating of birth to (t_{birth} – 10 months).
Control-variables added (incl. education, income, importance of children/job, etc.)
All adult respondents of cohorts 1956-1985, aged 16-45.

Model III: Indicators on current as well as latent labour market performance & integration
Backdating of birth to (t_{birth} – 10 months).
Control-variables added (incl. education, income, importance of children/job, etc.)
Partner information added (incl. partner's income, partner's unemployment/inactivity, partner's education, relative income, marital duration).
Only couples with partner being panel respondent, cohorts 1956-1985 aged 16-45.

Table 25: Determinants of First Birth Risk - Piecewise Constant Estimates for Germany Cohorts 1956 – 1985 during 1991 – 2005 (note: this table continued on next page)

	Model I				Model II (+Controls)				Model III (+Partner)			
	Men		***Women***		***Men***		***Women***		***Men***		***Women***	
	haz.	**b**	**haz.**	**b.**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**
Baseline age	(Measured in Months)											
16 to 21 Years	0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***		0.01 (0.00)***		0.00 (0.00)***	
22 to 26	0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***	
27 to 33	0.01 (0.00)***		0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***	
33 to 38	0.01 (0.00)***		0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***	
39 to 45	0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***	
Activity Status (*Reference:* Full-time Employed w. Permanent Contract; omitted Categories: Public & Self Employed)												
Fixed Term Contract (& Full-T.)	0.91 (0.10)		0.79 (0.09)**		1.02 (0.12)		0.78 (0.09)**		0.93 (0.12)		0.81 (0.09)*	
Part-Time Employed	0.37 (0.12)***		1.08 (0.13)		0.55 (0.18)*		0.89 (0.11)		0.63 (0.21)		0.96 (0.13)	
In Education/Apprenticeship	0.47 (0.07)***		0.35 (0.05)***		0.79 (0.11)		0.46 (0.07)***		0.93 (0.20)		0.62 (0.12)**	
Economically Inactive	0.69 (0.15)*		1.78 (0.18)***		1.08 (0.23)		1.13 (0.14)		1.12 (0.31)		1.10 (0.15)	
Unemployed	0.85 (0.11)		1.12 (0.15)		1.23 (0.18)		1.02 (0.15)		1.17 (0.27)		1.00 (0.18)	
Partner's Employment Status												
Partner Unemployed / Inactive									1.35 (0.13)***		1.14 (0.15)	
Overtime Index	(0-1 with 0 = No Overtime)											
Overtime/Working Hours	1.64 (0.61)		0.14 (0.09)***		0.95 (0.38)		0.13 (0.08)***		0.90 (0.39)		0.15 (0.10)***	
Occupational Mobility Since Last Year?												
Downward Mobile	1.08 (0.12)		0.84 (0.11)		1.01 (0.12)		0.86 (0.11)		0.96 (0.12)		0.87 (0.13)	
Upward Mobile	1.07 (0.11)		0.77 (0.10)**		1.01 (0.11)		0.83 (0.10)		0.91 (0.11)		0.85 (0.12)	
Duration of Continuous Employment:												
More than 24 Months	0.90 (0.07)		1.01 (0.08)		1.02 (0.08)		1.08 (0.08)		1.00 (0.09)		1.16 (0.10)*	
Long-term UE (>12Months) During the last 3 Years?	(*Reference:* Not Long-Term UE during last 3 years)											
Yes (1)	0.60 (0.10)***		0.58 (0.12)***		0.90 (0.16)		0.85 (0.16)		0.82 (0.17)		0.76 (0.18)	
Performance at Labour Market Entry / First Job	(*Reference*: Average Performance)											
Bad Performance / 1st Job below Educational Qualifications	0.89 (0.08)		0.84 (0.07)**		0.91 (0.08)		0.81 (0.07)**		0.89 (0.09)		0.78 (0.08)**	
Good Performance/ 1st Job above Educat. Qualifications	0.91 (0.10)		0.96 (0.12)		0.88 (0.11)		0.93 (0.11)		0.90 (0.12)		0.94 (0.13)	
Time Since Leaving Full Time Education	(*Reference*: Still in Education)											
Up to 36 Months	0.81 (0.10)*		1.88 (0.22)***		0.84 (0.10)		1.65 (0.19)***		0.91 (0.13)		1.84 (0.28)***	
37 – 72	1.31 (0.15)**		2.47 (0.31)***		1.12 (0.14)		1.78 (0.23)***		1.22 (0.17)		1.99 (0.31)***	
73 – 120	1.30 (0.16)**		2.76 (0.36)***		1.04 (0.13)		1.81 (0.24)***		1.13 (0.16)		2.04 (0.33)***	
121 – 160	1.15 (0.15)		2.27 (0.34)***		0.93 (0.13)		1.55 (0.24)***		1.10 (0.18)		1.82 (0.33)***	
More than 160 Months	0.99 (0.15)		1.75 (0.31)***		0.80 (0.13)		1.22 (0.24)		0.94 (0.17)		1.60 (0.36)**	

Table 25 continued on next page…

Table 25 continued…

	Model I				Model II				Model III			
	Men		***Women***		***Men***		***Women***		***Men***		***Women***	
	haz	**b**	**haz.**	**b.**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**
Region												
West (1) / East (2)	0.92	(0.07)	1.29	(0.09)***	1.19	(0.09)**	1.40	(0.10)***	1.37	(0.12)***	1.48	(0.13)***
Biographical Planning – Importance of Having: *(Reference:* Average Importance**)**												
Children – Low					0.43	(0.04)***	0.38	(0.04)***	0.43	(0.05)***	0.32	(0.04)***
Children – High					2.06	(0.15)***	2.10	(0.14)***	1.90	(0.15)***	2.02	(0.16)***
Good job – Low					0.83	(0.10)	1.15	(0.10)	0.93	(0.12)	1.15	(0.12)
Good job – High					0.90	(0.06)	0.83	(0.06)***	0.90	(0.07)	0.81	(0.07)**
Income	(Effects per 100€ / Month)											
Individual Net Labour Earnings					1.01	(0.00)***	0.99	(0.01)*	1.01	(0.00)***	0.99	(0.01)
Individual Transfers Received					1.01	(0.01)	1.02	(0.01)***	1.01	(0.01)	1.01	(0.01)**
Educational Attainment	(*Reference:* Comprehensive Schooling or Less)											
Third Level / University Degree					0.95	(0.10)	1.04	(0.11)	1.07	(0.12)	1.07	(0.14)
A Level Degree					0.74	(0.08)***	0.87	(0.08)	0.76	(0.09)**	0.96	(0.11)
O Level Degree					0.87	(0.07)*	0.92	(0.07)	0.84	(0.08)*	0.94	(0.09)
Partnerinformation	(Reference A / O Level Education)											
Partner's Education (Third Level Education)									1.03	(0.10)	1.11	(0.10)
Partner's Education (Lower Secondary or below)									1.03	(0.09)	1.06	(0.08)
Partner's Net Income (Effects per 100€ / Month)									1.00	(0.00)	1.01	(0.00)***
Type of Relationship	(*Reference:* Single*)*											
Consensual Union					12.88	(1.76)***	6.10	(0.72)***	*(Reference*: Consensual Union)			
Married					24.04	(3.34)***	10.98	(1.32)***	1.90	(0.13)***	1.85	(0.13)***
Relative Income	(*Reference:* even Income Level)											
Traditional (♂ 1/3 above ♀)									1.16	(0.10)*	1.21	(0.12)**
Fem. Main Earner (♀1/3>♂)									1.05	(0.17)	1.07	(0.11)
n of person months:	386758		308436		386758		308436		109388		115238	
n of subjects / events:	5.225/1.319		4.508/1.493		5.225/1.319		4.508/1.493		2.563/1.099		2.659/1.168	
Log pseudolikelihood:	-704.19		-390.51		219.95		256.10		631.18		709.41	
Wald chi2:	38425.40		38419.64		30768.50		34046.10		20829.32		21246.48	

Source: GSOEP 1991 to 2006; (author's calculations).

Notes: (1) Significance levels based on p < 0.10 (*), p < 0.05 (**) and p < 0.01 (***).
(2) Robust standard errors in parentheses.
(3) Independent variable coded with '1' for birth; all dummy variables coded '0/1' with 1 when true.

Table 26: Determinants of First Birth Risk - Piecewise Constant Estimates for the UK Cohorts 1956 – 1985 during 1991 – 2004 (note: this table continued on next page)

	Model I				Model II (+Controls)				Model III (+Partner)			
	Men		***Women***		***Men***		***Women***		***Men***		***Women***	
	haz.	**b**	**haz.**	**b.**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**
Baseline age	(Measured in Months)											
16 to 21 Years	0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***		0.01 (0.01)***		0.01 (0.00)***	
22 to 26	0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***	
27 to 33	0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***		0.01 (0.00)***		0.00 (0.00)***	
33 to 38	0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***		0.01 (0.00)***		0.00 (0.00)***	
39 to 45	0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***		0.00 (0.00)***	
Activity Status (*Reference:* Full-time Employed w. Permanent Contract; omitted Categories: Public & Self Employed)												
Fixed Term Contract (& Full-T.)	0.82 (0.14)		0.87 (0.15)		1.00 (0.16)		0.95 (0.16)		1.03 (0.19)		1.16 (0.21)	
Part-Time Employed	0.71 (0.22)		3.81 (0.35)***		0.70 (0.21)		2.41 (0.23)***		0.89 (0.26)		2.51 (0.25)***	
In Education/Apprenticeship	0.21 (0.06)***		0.29 (0.06)***		0.34 (0.11)***		0.37 (0.08)***		0.76 (0.26)		0.85 (0.24)	
Economically Inactive (n/a)												
Unemployed	0.94 (0.15)		2.26 (0.34)***		1.32 (0.21)*		1.90 (0.29)***		1.22 (0.22)		2.03 (0.38)***	
Partner's Employment Status												
Partner Unemployed / Inactive									2.06 (0.25)***		0.87 (0.17)	
Overtime Index	(0-1 with 0 = No Overtime)											
Overtime/Working Hours	1.11 (0.30)		0.47 (0.18)*		0.61 (0.19)		0.53 (0.19)*		0.55 (0.18)*		0.54 (0.23)	
Occupational Mobility Since Last Year?												
Downward Mobile	1.35 (0.14)***		1.01 (0.11)		1.38 (0.14)***		1.03 (0.11)		1.26 (0.14)**		1.00 (0.12)	
Upward Mobile	1.04 (0.11)		1.10 (0.11)		1.07 (0.11)		1.11 (0.11)		1.05 (0.12)		1.07 (0.11)	
Duration of Continuous Employment:												
More than 24 Months	0.73 (0.07)***		1.01 (0.10)		0.81 (0.08)**		1.06 (0.11)		0.84 (0.09)*		1.10 (0.12)	
Long-term UE (>12Months) During the last 3 Years? (*Reference:* Not Long-Term UE during last 3 years)												
Yes (1)	0.73 (0.12)**		0.96 (0.14)		1.02 (0.16)		1.04 (0.16)		0.87 (0.16)		0.92 (0.19)	
Performance at Labour Market Entry / First Job (*Reference*: Average Performance)												
Bad Performance / 1st Job below Educational Qualifications	1.10 (0.11)		1.07 (0.11)		0.84 (0.08)*		1.19 (0.13)		0.82 (0.09)*		1.20 (0.14)	
Good Performance/ 1st Job above Educat. Qualifications	1.25 (0.15)*		1.50 (0.17)***		0.85 (0.10)		1.12 (0.13)		0.82 (0.10)		1.09 (0.13)	
Time Since Leaving Full Time Education (*Reference*: Still in Education)												
Up to 36 Months	0.37 (0.07)***		0.85 (0.14)		0.68 (0.15)*		1.16 (0.20)		0.77 (0.17)		1.29 (0.23)	
37 – 72	0.78 (0.11)*		1.02 (0.14)		1.06 (0.16)		1.12 (0.16)		0.87 (0.14)		1.02 (0.16)	
73 – 120	1.14 (0.12)		1.26 (0.15)*		1.25 (0.14)**		1.19 (0.14)		1.18 (0.14)		1.13 (0.14)	
121 – 160	0.94 (0.10)		1.12 (0.14)		1.03 (0.11)		1.04 (0.13)		0.98 (0.11)		1.06 (0.13)	
More than 160 Months	6.15 (3.14)***		2.15 (0.55)***		3.50 (1.84)**		1.45 (0.37)		1.16 (0.88)		0.96 (0.32)	

Table 26 continued on next page…

Table 26 continued…

	Model I				Model II				Model III			
	Men		***Women***		***Men***		***Women***		***Men***		***Women***	
	haz	**b**	**haz.**	**b.**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**	**haz.**	**b**
Biographical Planning – Importance of Having: *(Reference:* Average Importance**)**												
Children – Low					0.21 (0.05)***		0.24 (0.05)***		0.18 (0.05)***		0.21 (0.06)***	
Children – High					3.73 (0.36)***		3.36 (0.31)***		3.50 (0.36)***		3.66 (0.40)***	
Good job – Low					0.41 (0.17)**		1.10 (0.28)		0.42 (0.18)**		0.93 (0.26)	
Good job – HIgh					0.72 (0.06)***		0.64 (0.05)***		0.74 (0.06)***		0.70 (0.06)***	
Income (Effects per 100€ / Month)												
Individual Net Labour Earnings					1.00 (0.00)***		1.00 (0.00)		1.00 (0.00)*		1.00 (0.00)	
Individual Transfers Received					1.01 (0.01)		1.07 (0.05)		0.99 (0.04)		1.10 (0.05)**	
Educational Attainment (*Reference:* Comprehensive Schooling or Less)												
Third Level / University Degree					0.64 (0.08)***		0.62 (0.09)***		0.71 (0.10)**		0.69 (0.11)**	
A Level Degree					0.73 (0.08)***		0.66 (0.08)***		0.71 (0.09)***		0.70 (0.10)**	
O Level Degree					0.80 (0.09)*		0.82 (0.10)		0.80 (0.10)*		0.80 (0.12)	
Partnerinformation (Reference A / O Level Education)												
Partner's Education (Third Level Education)									0.88 (0.08)		0.87 (0.07)	
Partner's Education (Lower Secondary or below)									1.11 (0.14)		1.40 (0.16)***	
Partner's Net Income (Effects per 100€ / Month)									1.00 (0.00)***		1.00 (0.00)***	
Type of Relationship (*Reference:* Single*)*												
Consensual Union					5.42 (0.68)***		2.74 (0.28)***		*(Reference*: Consensual Union)			
Married					12.33 (1.50)***		6.14 (0.63)***		2.23 (0.17)***		2.21 (0.18)***	
Relative Income (*Reference:* even Income Level)												
Traditional (♂ 1/3 above ♀)									0.96 (0.08)		0.92 (0.08)	
Fem. Main Earner (♀1/3>♂)									1.03 (0.13)		1.06 (0.11)	
n of person months:	266323		216034		266323		216034		89931		89792	
n of subjects / events:	4.014/956		3.318/1.062		4.014/956		3.318/1.062		2.034/860		1.940/882	
Log pseudolikelihood:	-482.54		-119.86		260.36		444.94		587.88		724.15	
Wald chi2:	28126.54		26761.60		22606.17		23339.36		16853.24		18186.78	

Source: BHPS 1991 to 2005; (author's calculations).

Notes: (1) Significance levels based on p < 0.10 (*), p < 0.05 (**) and p < 0.01 (***).
(2) Robust standard errors in parentheses.
(3) Independent variable coded with '1' for birth; all dummy variables coded '0/1' with 1 when true.
(4) Economic Inactivity omitted due to limited case numbers.

Notes for Table 25 & Table 26:

(1) Method: piecewise constant exponential hazard (see Jenkins 2005).

(2) Estimates controlled for repeated observations (robust standard errors).

(3) All estimated chi^2 values significant on basis of $p < 0.0001$.

(4) Dependent variable set at t-10 months prior to the time of first-birth.

(5) Process time measured in months since respondent's birth.

(6) Time spans for piecewise constants defined as month of age 0 to 252 (effectively month 193 to 252, as only adult respondents starting with the 16th year are being considered), month 253 to 312, month 313 to 396, months 397 to 456, months 457 to 540.

(7) Time at risk specified as 16th to 45th year of age (month 193 to month 540) within cohorts 1956-1985.

(8) Estimated but not displayed variables include dummy variables for year of observation, flag variable for missing values within dummy sets (education, activity status, occupational mobility, job-start/initial labour market performance, time since leaving education, etc.)

(9) All dummy variables coded '0/1' with 1 when true.

(10) Variable East/West included for Germany, to account for region specific effects.

(11) Income including net working income and assets; Income calculated per 100 currency units. For the UK only gross income data is available.
Currency units: Germany: Euro, UK: British Pounds.

(12) Due to backdating of the birth information by 10 months (see (3)) the last available panel wave cannot be implemented in the model estimates (i.e. 2006 for the GSOEP & 2005 for the BHPS).

Chapter Seven

Summary and Conclusion

> *"The White Rabbit put on his spectacles. 'Where shall I begin, please your Majesty?' he asked. 'Begin at the beginning,' the King said gravely, 'and go on till you come to the end: then stop.' "*
>
> Lewis Carrol, Alice's Adventures in Wonderland

In this study, I have addressed the impact of labour market engagement on the transition to first parenthood. I have argued that any in-depth discussion of this topic requires a micro-level view focused on individual actors. While this may seem obvious, there are numerous studies that address fertility development solely from an aggregate level perspective. Such a broad view, however, makes it impossible to explore how individual choices are situated in the framework of institutional and occupational opportunities and constraints, and how the corresponding mechanisms affect family formation rationales.

An analysis of family formation that is anchored at the micro-level must inevitably focus on three central themes. **First**, the life-changing decision to become a parent is rarely made spontaneously. Rather, the choice to start a family emerges over time in the context of sequential choices and biographical development. ***A micro-level focused perspective on the genesis of fertility plans and choices over time***, particularly within the life course, is therefore an indispensable tool in understanding the genesis of the transition to parenthood within individual life courses. **Second**, the choice to have a child is commonly made by both the man and the woman. The fact that it "takes two to tango" may seem – again – too obvious. However, I have shown that an analytically adequate consideration of the fertility decision-making processes within couples is far from trivial. People have to negotiate their fertility plans with their partners – who may not have congruent or even complimentary plans – and they have to align their fertility plans with life goals that may compete with the aim of starting a family. Moreover, men and women face widely differing constraints in modern societies, particularly if

childbearing decisions are examined in the context of individual career aspirations and occupational insecurities. Thus, ***a gender-specific perspective that investigates the constraints faced by men and women*** is indispensable. This brings us to the **third** key theme of this study. Gainful employment is the main competitor for family formation within the life course, since both domains impose tight restrictions on people's time budgets – both in everyday life and across the lifetime. The nature and extent of this antagonism is profoundly affected by institutional arrangements that shape predominant gender roles and that structure labour markets and individual opportunities within them. The extent to which welfare states aim to protect individuals from risks across the life course, and the extent to which individuals have to focus on paid work in order to compensate for a lack of institutional protection from hardships plays a crucial role in shaping work-family conflicts (see Mayer 2005). In this context, I have argued that it is essential to employ ***a cross-national comparative perspective*** in order to highlight the impact of specific cultural patterns and institutional arrangements, particularly where they affect men and women differently. The inconsistency in role demands for women, both on the labour market and within the family is certainly a central issue in understanding the reluctance of many women in traditional societies to start a family.

In this concluding chapter, the following section (7.1) will serve to recapitulate key aspects of these three themes that have been elaborated throughout this study. Section 7.2 will serve to highlight a series of central findings that – based on the outlined theoretical background – emerged from the empirical case studies in Chapters 5 and 6. Finally, Section 7.3 will conclude this study by synthesizing both central considerations and limitations that have influenced the study at hand, and by formulating potentially fruitful directions for future research.

7.1 Summary and Overview

The Micro-Theoretical Framework of Transition to First Birth

The main theoretical arguments put forward in this study are based on the assumption that in most cases, the transition to parenthood relies on a rational choice among alternatives. The assumption of rationally choosing actors (see Lindenberg 1985) was not only supported by empirical evidence (see Section 4.1), but is also justified as the status passage to parenthood

commonly entails fundamental and consequential changes in the life course. Moreover, the transition to the first child is not only a live-changing decision but also an irrevocable one. Hence, actors have an incentive to decide carefully whether, and when, to start a family.

Becoming a parent entails long-term commitments, and involves demanding prerequisites for making this step. Aside from establishing a reliable partnership, most people try to establish a reliable economic foundation prior to family formation. Yet, starting a family not only involves the need for economic consolidation; it also curtails alternative biographical options. Hence, the timing of family formation relies crucially on a biographical arrangement of central life course goals. Given that it is usually two partners that conjointly decide to start a family, this decision entails that two people arrange their linked lives by reconciling their individual biographical plans.[161]

Educational attainment and labour market participation are key competitors with family formation in modern societies. Occupational engagement and the preceding educational preparation on the one side, and having a child on the other, both rely on a profound normative anchoring (see Hobcraft & Kiernan 1995). And while both areas of life provide key means to attain central life goals, a consolidated occupational position provides economic resources that in turn expand the possibilities for how one can arrange one's life. Moreover, participating in gainful employment provides social connectedness as well as social recognition, and frequently also serves as a means of to increase self-esteem. In turn, family formation provides similar resources through linkage to kinship groups (see Leibenstein 1975) and self-definition through status as a parent, and also generates social esteem and acceptance as an adult in society (see Hoffman & Hoffman 1973; Nauck 2005). Perhaps the most important factor in modern societies is the immanent value-based joy of having a child. Starting a family, moreover, creates a closely linked social group that provides both emotional and physical mutual support, and also serves to protect group members from economic hardships.

---

[161] In the theoretical framework, I have conceptualized this arrangement as a cooperative bargaining process between partners who negotiate over how parental burdens will be shared. Explicit or implicit contracts in this context serve to ensure that the significant other will not take advantage of the partner's temporary focus on the homemaker role. Aside from mutual trust and reciprocity, such contracts serve to convince the – usually female – homemaker that arrangements, which may include the option to return to paid work, will be kept in the future. This ascertains that career aspirations, e.g., can be reconciled with parenthood, even where a temporary focus on a caregiver role causes economic dependencies (see Ott 1995; see Section 4.4).

In this sense, both gainful employment and becoming a parent provide the key resources of (physical) well-being, and social esteem. Both foci in the individual life course provide means to reach these universal goals, as specified in a social production function approach (see Lindenberg 1991). But while some people choose to focus exclusively on work *or* family, most people in modern societies strife to achieve both goals: to become a parent and still have a successful career. This is true not least of all because labour market participation creates well-being through economic resources that cannot be provided by a families, while the latter offers forms of social exchange, cohesion, and mutual support not provided by market organisations (see Coleman 1990: 584ff.).

The conclusion to be drawn from these considerations, however, is a quite paradoxical one: While both domains compete over scarce resources – the most central being a limited time budget in everyday life, as well as across the life course – family formation first depends on the provision of economic security and protection against basic hardships. While welfare state support is partially capable of protecting people from such risks, occupational integration remains the key means to provide this backing. However, while the rejecting of occupational opportunities often irrevocably limits future options, the transition to parenthood can be postponed easily – apparently without any consequences. Actors tend to avoid pre-commitments in order to maximise future options. This commonly results in delaying momentous and irreversible decisions like the one to start a family (see Lundberg & Pollak 2007: 23), particularly where the institutional setting no longer guarantees predictable future circumstances.

A key perspective on the issue of fertility behaviour is that institutions mediate the extent to which actors are capable of combining central life goals with the transition to parenthood. This shifts the focus to the macro-level of society where the structuring impact of institutions serves as a central frame of reference for individual behaviour (see Coleman 1990). In this context, it is essential to distinguish a) the extent to which institutions address men and women differently, thus exerting different role conflicts in the work-family nexus, and b) the variability in institutional and cultural patterns across countries. There, different arrangements and backgrounds result in different individual responses of realizing the transition to parenthood.

A Cross-National View on Institutional Orientation

A key theme of the study at hand was to distinguish how institutional arrangements shape fertility behaviour across countries. I have argued that taking the approach of a cross-national comparison can be a fruitful guideline to understanding and distinguishing the various mediating mechanisms by which culture and institutions shape life courses. This macro-level background plays a key role in mediating work-lifestyle choices that affect fertility (see Kangas & Rostgaard 2007). This notion is supported by striking regularities in persistently low fertility across countries that institutionally favour a traditional male breadwinner / female caregiver model. In exploring this background, I started out by delineating general typologies of institutional regimes with a particular focus on the orientation of the welfare state.

In an initial distinction, I differentiated welfare states along the lines suggested by Esping-Andersen (1990, 1999). I expanded this differentiation with a view on predominant patterns of differential addressing of men and women in welfare state policies, as proposed by Lewis (1992), Ostner (1998), or Sainsbury (1996, 1999). Whereas Esping-Andersen focuses on how the welfare state affects individual choices through its labour market orientation and the general stratification of risks, the approaches of the latter authors focus on how institutional arrangements tend to reproduce gender inequality. Integrating these two approaches produced the vital conclusion that where paid work forms a key aspect of individual's lives in industrial societies, the welfare state's labour market arrangements and its reproduction of gender (in)-equality are two sides of the same medal.

Given that the labour market as a societal system takes a central position in affecting both gender and life-phase-specific inequalities, the predominant model of market coordination emerges as a key element in welfare state intervention, mediating the extent to which individuals are exposed to life course risks. This context defines the outline of conditions in which people must situate the transition to parenthood. In liberal market economies, such as the US or the UK, actors are exposed to labour market-related risks, and industrial relations are characterized by more unreliable and precarious patterns. Hence, individuals have to constantly focus on paid work in order to contain the risk of economic dependence. In contrast, coordinated market economies like Germany or France encourage long-term employment relations. Gainful employment is thus shaped by a higher degree of trust and reliability in industrial relations, which fosters people's ability to make long-term commitments in the private domain, which in turn exerts an impact on family formation behaviour (see Hall & Soskice

2001; Soskice 2005). Yet, a pronounced legal protection of employees also increases the reluctance of firms to hire staff, what deepens the divide between labour market insiders and outsiders and results in a higher risks of economic dependence, particularly in the form of long-term unemployment (see DiPrete 2002; Mayer 2004). Thus, different institutional regimes entail different types of life course risks, which each pose specific threats to the future stability of families. This results in different requirements for making the transition to parenthood, and different coping strategies to contain such risks.

Moreover, I have argued in line with McDonald (2002) that to understand national particularities in fertility behaviour, one must examine a society's institutional arrangements with reference to its cultural-historical origins. Even in modern societies, the extent of secularization, e.g., continues to exert an impact on people's values and perceptions about parenthood, as well as on policy arrangements and people's expectations about these policies. An examination of Germany and France has served to underline this argument. Both countries display a conservative welfare state orientation and a coordinated market economy.

The cultural background of Germany, where religious norms still implicitly structure institutional arrangements, leads to contexts where social policies tend to reproduce traditional gender roles. In contrast, France, with its long history of laicism exhibits less rigid norms of maternal care and explicitly supports the working mothers. This is backed by a fundamentally different social policy orientation than in Germany, with wide-ranging support to women in combining maternal and occupational roles. In contrast, their German counterparts are encouraged to retreat from the labour force when they decide to start a family. This not only cultivates female dependency on the male breadwinner but also contradicts incentives in other institutions to invest in education and to participate in gainful employment.

Yet, the encouragement of traditional gender roles – unilaterally fostering the role of the female homemaker – not only ignores women's aspirations toward autonomy and emancipation from (economic) dependence: it also neglects the need to provide a stable foundation for family formation through a second earner in the light of labour market related insecurities. The key conclusion is that different institutional regimes create different levels of contradictions in their incentive structure, particularly with respect to inconsistent arrangement of female market and family roles. Striking cross-national evidence links such states, where an inconsistent encouragement of female roles is predominant, to low levels of fertility (see Neyer 2003). Yet, only a detailed view on the micro-level is capable of unravelling, which coping

strategies individuals develop in response to such contradictory roles that hamper the ability to combine work with starting a family. The following section will provide a summary of key findings in this context.

7.2 Key Findings

This section provides an overview of key findings from the empirical analyses presented in Chapters 5 & 6 and places them in the context of central theoretical conclusions from the preceding chapters. Generally, the findings suggest that the way in which occupational insecurities and the extent to which individual labour market integration affect the transition to parenthood crucially depends on the predominant institutional arrangements in a society.

The Transition to Parenthood in the Context of Labour Market Participation

Among men, incomplete labour market integration and latent occupational insecurities, for example, in the form of earlier long-term unemployment, appear to hamper the step to become a father. However, the evidence of this relation remains vague and appears to be primarily related to the decline in income. That is, in contrast to the theoretical assumptions, reduced breadwinner abilities due to precarious and instable employment do not necessary signal a latent incapability to support a family, but rather result from a direct reduction in earnings capacity. With the exception of the UK, where there are some hints that unemployment and economic inactivity might indeed trigger a compensation by focusing on the family domain, thus increasing the likelihood of family formation among some men, the context outlined here applies to all of the observed countries. This cross-national similarity does not come as a surprise, since in virtually all industrialized countries, norms of *extensive* male involvement in parental duties are virtually non-existent. Familial burdens thus do not play any role in hampering male occupational engagement.

Yet, for women, there is ample evidence of major conflicts between maternal and occupational roles. The findings point to distinct cross-national differences in the level of these conflicts. Particularly for women in Germany and the UK, combining the transition to parenthood with an occupational career highlights extreme difficulties in reconciling responsibilities in these two domains.

In particular, women in precarious employment situations do in fact try to focus on their career or an occupational reintegration in case of unemployment to avoid economic dependence or a depreciation of their skill investments. The negative impact of fixed-term contracts or occasional jobs on fertility decisions among German women, the reluctance of women to start a family during episodes of unemployment in the UK, and the negative impact of an unpromising entry into the labour market (what lengthens the process of occupational integration), all provide distinct evidence in this direction. Yet, where occupational prospects are bleak, or where a close link to the labour market has been severed during a longer labour market absence due to unemployment or subsequent economic inactivity, such a context clearly tends to speed up the transition to motherhood. Particularly among women in Germany[162] and the UK, I found evidence that placing the transition to parenthood in such phases of involuntary labour market absence marks a distinct pattern with an increased propensity of starting a family in these countries.

This context turned out to be particularly pronounced among women in the UK. Under the impact of a liberal market economy, actors face a high exposure to occupational insecurities that is flanked by only rudimentary welfare state protection (see Hall & Soskice 2001). This results in the necessity to establish a sound labour market position to attenuate economic risks. In this context, women in the UK tend to delay the transition to parenthood, while the economic necessity to work induces the need to *combine* work and family. Yet, in contrast to their counterparts in France, who also favour a parallel combination of these roles, women in the UK do not find any institutional support for this strategy of family formation. They therefore show a higher propensity to decide for a first child during periods of involuntary exclusion from the labour market since the opportunity costs of parenthood are low during these periods. Yet, this coping strategy, evoked by the limited institutional support for parenthood in the UK, seriously undermines the biographical planing of family formation, and instead increases the exogenous determination of the timing of realizing this central life goal.

[162] The results for Germany in the context of unemployment are less clear. The empirical investigation in Chapter 6 did show an impact of inactivity that frequently succeeds a longer unemployment spell, while, in contrast to Chapter 5, I could not identify any distinct evidence of unemployment increasing the likelihood to decide for a first child. This might be since, different patterns of combining unemployment with the transition to parenthood have perhaps become prevalent under impact of increasing labour market insecurities since the late 1990ies, in which direction the duration of the empirical investigations in Chapter 6 has been expanded.

The institutional conditions in France provide a completely different background of supporting women in their plans the start a family: women in France show the most pronounced labour market attachment among the observed countries. In fact, the predominant patterns in France show that women combine occupational participation with the transition to motherhood in ways very similar to those identified among men. That is, there is no distinct evidence of difficulties in reconciling gainful employment with motherhood, which is certainly also related to the extensive opportunities and broad social acceptance of public childcare.

Given the institutional arrangements in the Scandinavian welfare state of Finland, one might expect a similar pattern there to the one seen in France. However, Finnish women also show distinct patterns of making the transition to parenthood during unemployment. While this is certainly closely related to the deep recession Finland experienced during the early to mid-1990s, this once again stresses that unpromising occupational prospects affect female fertility decisions. That is, bleak prospects obviously encourage a retreat from the labour force and tend to speed up the transition to parenthood. This strategy serves to reduce the opportunity costs of parenthood, where caregiver burdens are primarily ascribed to the mother, which – to a certain extent – still applies even in the Finnish welfare state, although it shows the strongest encouragement of egalitarian gender roles across the observed countries.

The results suggest that particularly among more highly educated women who have invested thoroughly in their education, the transition to parenthood and subsequently ascribed carer duties are perceived as serious threats to occupational opportunities. In the light of limited time budgets, strict norms of maternal care, and an underdeveloped childcare infrastructure, higher-skilled women, particularly in Germany and the UK, find it difficult to combine their career aspirations with motherhood. Consequently, women with a higher levels of education try to retain their focus on a career even after facing longer episodes of unemployment. The exception to this rule are – once again – women in France, where institutional support seems to enable a reconciliation of motherhood even with high career aspirations. In contrast, an extensive labour market attachment among German and British women clearly exacerbates the delay in family formation. This leads to a general rejection of motherhood among some women in these countries because they see it as being incompatible with their career aspirations under institutional contexts that encourage traditional gender roles.

Summarizing the above, the cross-national comparative investigations suggest a generally close labour market attachment among women. The tendency to consolidate educational

achievements in an appropriate occupational position is prevalent across all the observed countries. Yet, particularly in Germany and the UK – both countries that still extensively foster traditional gender roles – women show pronounced difficulties in combining gainful employment and motherhood. The consequence is a long delay in the transition to parenthood. But where women in the UK still focus on achieving a parallel combination of work and family roles – not least because the welfare state's insurance against economic risks provides no alternative to individual labour market participation – among women in Germany a sequential model of family formation is prevalent. Yet, the long period of maternity leave often hampers women's return to the labour market, and the limited childcare infrastructure combined with strict norms of maternal care further promotes a sole focus on the maternal carer role. This context also signals pronounced incompatibilities between motherhood and work for those women who do not yet have a child.

The ways in which women are addressed in the individual-centred market institutions and in family-oriented institutions are often contradictory (see McDonald, 2000). This is reflected in the institutional encouragement to invest in educational and vocational skills and participate in gainful employment, on the one side, and the encouragement to play the female caregiver role, on the other. The German and the British welfare state are paradigmatic examples of how institutional arrangements cultivate contradicting demands on women that result in severe difficulties in combining the widespread life course goals to *both* participate in gainful employment *and* to start a family.

7.3 Concluding Remarks and Suggestions for Future Research

Limitations of the Study and Concluding Remarks

In this final Section, I will offer a brief reflection on some of the limitations and considerations involved in the present study. I will conclude with some suggestions for future research. A salient issue is the complexity of the micro-theoretical framework. In this context, it was my aim to develop an encompassing theoretical perspective on the emergence of the plans and the decisions, involved in becoming a parent.

It should be noted that the demands of the resulting framework clearly exceed the capabilities of available empirical data and methods. The most significant limitations in applying the theoretical considerations to the empirical investigations pertain to the consideration of longer decision sequences or developmental processes that lie beyond the measurement of educational degrees or vocational skills. Yet, the availability of information on such individual developments, desires, and attitudes is limited in current micro-data. Furthermore, I have tried to fulfil some of the claims, derived from the theoretical model by including a – certainly limited – array of partner information in the empirical analyses. This includes relative income, partner's education, or the duration of the partnership as an indicator of the development of mutual trust. While these indicators provide vital information for the accuracy of the empirical investigation, they remain limited as representations of the theoretical considerations in partnered decision processes. Moreover, the consideration of partner data introduces a bias to the empirical estimates as considering *both* individual and partner-information exponentiates any non-response bias.

Moreover, the discussion of the transistion to parenthood in a cross-national perspective on labour markets and institutional arrangements raises the question: 'Why focus on the respective set of countries I have chosen?' Part of the answer is that I have tried to outline the considerations involved in choosing a set of welfare states that provide paradigmatic patterns in supporting individual actors, in protecting from life course risks and in encouraging either egalitarian or traditional gender roles. The focus on a conservative, a liberal and a social-democratic welfare state (enriched by a comparison of Germany and France, which both pursue a conservative welfare state approach, yet show fundamentally differing fertility patterns) was inspired by the theoretical and empirical work by authors like Esping-Andersen, Lewis, Sainsbury or Mayer. Nonetheless, this type of selection, which precedes an empirical analysis, also relies on methodological considerations. The research theme of the present study required comparable longitudinal data that encompass a broad array of information on both individual fertility and employment histories, and preferably also on subjective indicators like attitudes or desires. This clearly limits the set of countries to choose from, and finally led to the selection I made. The theoretical elaborations suggest that it might be valuable for future research to extend the perspective to the Southern Rim countries. In particular, the similarity between Italy or Spain and Germany in both cultural-institutional background as well as in fertility patterns (see Hobcraft 2004) might proof valuable for understanding the emergence of

low fertility. Yet, the data, available for Southern European countries to date restricts the scope of analyses that are currently possible[163].

A key aspect in this study has been to include the family formation choices of *men* in the empirical and theoretical elaboration of a gender perspective on fertility behaviour. While the view on male fertility behaviour remains chronically underexposed in empirical research and has only begun to receive attention in recent years (see, e.g., Greene & Biddlecom 2000, Toulemon 2001, or Tölke & Diewald 2003), there are a two particularities involved in analysing the fertility decisions of men that should be mentioned. First, men's reporting of fertility remains incomplete (see, e.g., Rendall et al. 1999)[164]. Regarding empirical estimates that crucially focus on identifying the factors that encourage the family formation for men, this incorporates a biasing effect, where men who already are fathers are included in the analyses, although they are no longer at risk of having a first child.

Moreover, across countries, central institutions address *men* through a broadly consistent role ascriptions under the full-time working breadwinner template (see Moen 2003). It is particularly the coping strategies of *women* – who have to arrange contradicting roles in the family and in the labour market – that correspond to variations in institutional arrangements. Hence, where this study has kept the attention primarily on fertility behaviour of *women*, this focus was employed to highlight the fact that the adverse and contradictory conditions women face in the home and in the market are crucial for understanding fertility postponement in modern societies. In contrast, for men, such conflicting demands did proof to be widely absent across all of the observed countries. Even in societies that tend to encourage egalitarian gender roles like the Scandinavian welfare states, institutional scripts still associate male roles with market engagement, while female scripts oscillate between male occupational and female carer roles. Men's takeover of parental responsibilities is only mildly encouraged by policy incentives.

---

[163] Some interesting evidence has already been presented, for example by Golsch (2004) or Baizan (2005).

[164] The higher levels of male childlessness, also reflected in Figure 4a & 4b, Figure 15, Figure 21 & Figure 22, can – in part – be explained by an deliberate misreporting and by a lack of knowledge about individual fatherhood (see Schmitt 2008, see also Chapter 2.1.6).

Suggestions for Future Research

A more detailed view of shifts towards more egalitarian gender roles would require a focus on changes in fertility behaviour as part of social change, a perspective not explicitly taken in the present study[165]. Such a research focus would profit from a view on changes in fertility behaviour in subsequent cohorts. A closer investigation of this issue could prove to be valuable in light of recent changes to social policy arrangements that tend toward an encouragment of male engagement in childcare responsibilities within societies that are generally characterized by highly traditional gender roles. This includes, for example, the introduction of *paternal* leave regulations in the UK in 2003 or the parental leave reform in Germany with the so-called 'Elterngeld'[166]. An investigation of changes in individual fertility behaviour could query whether these *slight* shifts in family policies do in fact represent changes in culturally anchored norms in the direction of more egalitarian gender roles, which acknowledge the increasing prevalence of female labour market attachment.

Moreover, I have argued that a limited institutional protection from life course risks affects family formation behaviour, for example, by increasing the need to maintain a close focus on employment in order to contain economic risks. As a concluding hypothesis, I would suggest that this extent of welfare state protection also mediates the individual demands for (economic) security as part of the internalised prerequisites of starting a family. In this context, I would speculate that individual demands for security are more pronounced in societies that generally endow actors with a higher level of protection from life course risks. Accordingly, a research focus on the context of occupational insecurities might provide crucial evidence by unravelling whether a high level of institutional insurance against risks has an impact on individual risk attitudes, thus determining the tolerable degree of uncertainty and insecurity under which starting a family remains an option.

---

[165] I have considered whether fertility behaviour has changed in the context of increasing occupational insecurity since the late nineties, particularly in Germany. I have done so by including time-based interaction effects in some of the empirical estimates in Chapter 6. Yet, the results did not provide any consistent evidence of a significant change in first-birth decision making on the basis of precarious employment patterns (results omitted).

[166] An central novelty of this parental leave reform is the consideration of a close labour market attachment of both men *and* women what is acknowledged by introducing an income replacement into German parental leave regulations (see Büchner, Haan, Schmitt, Spieß & Wrohlich 2006)

References

Aaberge, Rolf, Ugo Colombino, Daniela Del Boca, John Ermisch, Marco Francesconi, Silvia Pasqua, and Steinar Strøm. 2005. "Women's Participation in the Labor Market and Fertility: The Effects of Social Policies." Pp. 121-153 in *Women at Work. An Economic Perspective*, edited by T. Boeri, D. Del Boca & C. Pissarides. Oxford: Oxford University Press.

Adsera, Alicia. 2005. "Where are the Babies? Labor Market Conditions and Fertility in Europe." *IZA Discussion Paper Series* 1576.

Ahn, Namkee and Pedro Mira. 2002. "A Note on the Changing Relationship between Fertility and Female Employment Rates in Developed Countries." *Journal of Population Economics* 15:667-682.

Ainslie, George and Nick Haslam. 1992. "Hyperbolic Discounting." Pp. 57-92 in *Choice over Time*, edited by G. Loewenstein & J. Elster. New York: Sage.

Ajzen, Icek. 1991. "The Theory of Planned Behavior." *Organizational Behavior and Human Decision Processes* 50:179-211.

—. 2002. "Residual Effects of Past on Later Behavior: Habituation and Reasoned Action Perspectives." *Personality and Social Psychology Review* 6:107-122.

Ajzen, Icek and Martin Fishbein. 1980. *Understanding attitudes and predicting social behaviour*. London, Sydney, Toronto: Prentice Hall.

—. 2005. "The Influence of Attitudes on Behavior." Pp. 173-222 in *The Handbook of Attitudes*, edited by D. Albarracin, B. T. Johnson & M. P. Zanna: Lawrence Erlbaum Associates.

Andersson, Gunnar. 1999. "Childbearing Trends in Sweden 1961-1997." *European Journal of Population* 15:1-24.

—. 2000. "The Impact of Labor-Force Participation on Childbearing Behavior: Pro-Cyclical Fertility in Sweden during the 1980s and the 1990s." *European Journal of Population* 16:293-333.

—. 2004. "Childbearing developments in Denmark, Norway and Sweden from the 1970s to the 1990s. A comparison." *Demographic Research Special Collection* 3:155-176.

—. 2005. "A Study on Policies and Practices in Selected Countries that Encourage Childbirth: The Case of Sweden." *MPIDR Working Paper Series* 5.

Andersson, Gunnar, Ann-Zofie Duvander, and Karsten Hank. 2004. "Do Child-Care Characteristics Influence Continued Child Bearing in Sweden? An Investigation of the Quantity, Quality, and Price Dimension." *European Journal of Social Policy* 14:407-418.

Andersson, Gunnar, Jan M. Hoem, and Ann-Zofie Duvander. 2006. "Social differentials in speed-premium effects in childbearing in Sweden." *Demographic Research* 14:51-70.

Apps, Patricia and Ray Rees. 2003. "Fertility, Taxation and Family Policy." *University of Sydney / Sydney Law School Working Paper Series*.

—. 2005. "Gender, Time Use and Public Policy over the Life Cycle,." *Oxford Review of Economic Policy* 21:439-461.

Arts, Wil and John Gelissen. 2002. "Three Worlds of Welfare Capitalism or More? A State-of-the-Art Report." *Journal of European Social Policy* 12:137-158.

Astone, Nan Marie, Constance A. Nathanson, Robert Schoen, and Young J. Kim. 1999. "Family Demography, Social Theory, and Investment in Social Capital." *Population and Development Review* 25:1-31.

Axinn, William G. and Jennifer S. Barber. 2001. "Mass Education and Fertility Transition." *American Sociological Review* 66:481-505.

Azmat, Ghazala, Maia Güell, and Alan Manning. 2006. "Gender Gaps in Unemployment Rates in OECD Countries." *Journal of Labor Economics* 24:1-37.

Bachu, Amara. 1996. "Fertility of American Men." *U.S. Bureau of the Census. Population Division Working Paper Series* 14.

Bagozzi, Richard P. and M. Frances Van Loo. 1978. "Toward a General Theory of Fertility: A Causal Modeling Approach." *Demography* 15:301-320.

Baizan, Pau. 2005. "Couples' Careers and Fertility. An Event-History Analysis of the ECHP Samples of Denmark, Italy, Spain, and United Kingdom." in *XXV IUSSP International Population Conference*. Tours.

Baltes, Paul, Ulman Lindenberger, and Ursula Staudinger. 1998. "Life-SpanTheory in Developmental Psychology." Pp. 1029–1143 in *Theoretical Models of Human Development. Handbook of Child Psychology*, vol. 1, edited by R. Lerner & W. Damon. New York: Wiley.

Bambra, Claire. 2004. "The worlds of welfare: illusory and gender blind?" *Social Policy and Society* 3:201-211.

Bandura, Albert. 1986. *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs, NJ: Prentice-Hall.

Barber, Jennifer S. 2001. "Ideational Influences on the Transition to Parenthood: Attitudes toward Childbearing and Competing Alternatives." *Social Psychology Quarterly* 64:101-127.

Barber, Jennifer S., William G. Axinn, and Arland Thornton. 1999. "Unwanted Childbearing, Health, and Mother-Child Relationships." *Journal of Health and Social Behavior* 40:231-257.

Beach, Lee Roy, Alexandra Hope, Brenda D. Townes, and Frederick L. Campbell. 1982. "The Expectation-Threshold model of reproductive decision making." *Population & Environment* 5:95-108.

Beaujot, R. and J. Liu. 2002. "Children, Social Assistance and Outcomes: Cross National Comparisons." *Luxembourg Income Study, Working Paper Series* 304.

Beblo, Miriam. 2001. *Bargaining over Time Allocation: Economic Modeling and Econometric Investigation of Time Use within Families, Dissertation*. Heidelberg: Springer/ Physika.

Becker, Gary S. 1960. "An Economic Analysis of Fertility." Pp. 209-240 in *Demographic and Economic Change in Developed Countries.*, edited by R. A. Easterlin: Princeton University Press.

—. 1965. "A Theory of the Allocation of Time." *The Economic Journal* 75:493-517.

—. 1974. "A Theory of Marriage: Part II." *The Journal of Political Economy* 82:S11-S26.

—. 1981. "Altruism in the Family and Selfishness in the Market Place." *Economica* 48:1-15.

—. 1985. "Human Capital, Effort, and the Sexual Division of Labor." *Journal of Labor Economics* 3:S33-S58.

—. 1993. *A treatise on the family. Enlarged Edition*. Cambridge MA: Harvard University Press.

—. 2003. "Die Bedeutung der Humanvermögensbildung in der Familie für die Zukunft von Wirtschaft und Gesellschaft." Pp. 89-102 in *Demographie und Wohlstand*, edited by C. Leipert. Opladen: Leske & Budrich.

Becker, Gary S. and Robert J. Barro. 1986. "Altruism and the Economic Theory of Fertility." *Population and Development Review* 12:69-76.

—. 1988. "A Reformulation of the Economic Theory of Fertility." *The Quarterly Journal of Economics* 103:1-25.

Becker, Gary S. and H. Gregg Lewis. 1973. "On the Interaction between the Quantity and Quality of Children." *The Journal of Political Economy* 81:S279-S288.

Becker, Gary S. and Nigel Tomes. 1976. "Child Endowments and the Quantity and Quality of Children." *The Journal of Political Economy* 84:S143-S162.

Beets, Gijs. 1999. "Education and Age at First Birth. Demos Special Issue. Online Reference: http://www.nidi.knaw.nl/web/html/public/demos/dm99epc2.html#Table Access data: 02/10/2007." *Demos. Bulletin on Population and Society* 15.

Benzion, Uri, Amnon Rapoport, and Joseph Yagil. 1989. "Discount Rates Inferred from Decisions: An Experimental Study." *Management Science* 35:270-284.

Berger, Peter L. and Thomas Luckmann. 1966. *The Social Construction of Reality: A Treatise in the Sociology of Knowledge*. Garden City: Anchor.

Bergmann, Barbara, R. 1995. "Becker's Theory of the Family: Preposterous Conclusions." *Feminist economics* 1:141-150.

Berk, Richard A. and Sarah Fenstermaker Berk. 1983. "Supply-Side Sociology of the Family: The Challenge of the New Home Economics." *Annual Review of Sociology* 9:375-395.

Bielby, William T. and James N. Baron. 1986. "Sex Segregation Within Occupations." *The American Economic Review* 76:43-47.

Bielby, William T. and Denise D. Bielby. 1992. "I Will Follow Him: Family Ties, Gender-Role Beliefs, and the Reluctance to Relocate for a Better Job." *American Journal of Sociology* 97:1241-1267.

Bien, Walter, Thomas Rauschenbach, and Birgitt (Eds.) Riedel. 2006. *Wer betreut Deutschlands Kinder? DJI-Kinderbetreuungsstudie*. Weinheim, Basel: Beltz.

Birg, Herwig. 1991. "A Biographic/Demographic Analysis of the Relationship between Fertility and Occupational Activity of Women and Married Couples." Pp. 133-157 in *Female Labour Market Behaviour and Fertility*, edited by J. J. Siegers, J. d. Jong-Gierveld & E. van Imhoff. Berlin: Springer.

Birg, Herwig, E.-Jürgen Flöthmann, and Iris Reiter. 1991. *Biographische Theorie der demographischen Reproduktion*. Frankfurt/Main: Campus.

Bittman, Michael, Paula England, Nancy Folbre, Liana Sayer, and George Matheson. 2003. "When Does Gender Trump Money? Bargaining and Time in Household Work." *The American Journal of Sociology* 109:186-214.

Björklund, Anders. 2006. "Does family policy affect fertility?" *Journal of Population Economics*:3-24.

Blau, Francine D. and Lawrence M. Kahn. 2000. "The Gender Earnings Gap: Learning from international Comparisons." *American Economic Review* 82:533-539.

Blau, Peter. M. 1964. *Exchange and Power in Social Life*. New York: Wiley and Sons.

Blossfeld, Hans-Peter. 1990. "Berufsverläufe und Arbeitsmarktprozesse. Ergebnisse sozialstruktureller Längsschnittuntersuchungen." Pp. 118-145 in *Lebensverläufe und sozialer Wandel Sonderheft 31 der Kölner Zeitschrift für Soziologie und Sozialpsychologie*, edited by K. U. Mayer. Opladen: Westdeutscher Verlag.

—. 1995. "Changes in the Process of Family Formation and Women's Growing Economic Independence: A Comparison of Nine Countries." Pp. 3-34 in *The New Role of Women. Family Formation in Modern Societies*, edited by H.-P. Blossfeld. Boulder, San Francisco, Oxford: Westview.

Blossfeld, Hans-Peter and Johannes Huinink. 1991. "Human Capital Investments or Norms of Role Transition? How Women's Schooling and Career Affect the Process of Family Formation." *The American Journal of Sociology* 97:143-168.

—. 2001. "Lebensverlaufsforschung als sozialwissenschaftliche Forschungsperspektive. Themen, Konzepte, Methoden und Probleme." *Bios - Zeitschrift für Bevölkerungswissenschaft*, 14:5-31.

Blossfeld, Hans-Peter and Ursula Jaenichen. 1992. "Educational Expansion and Changes in Women's Entry into Marriage and Motherhood in the Federal Republic of Germany." *Journal of Marriage and the Family* 54:302-315.

Blossfeld, Hans-Peter, Erik Klijzing, Melinda Mills, and Karin Kurz. 2005. "Globalization, uncertainty and youth in society." London, New York: Routledge.

Blossfeld, Hans-Peter and Rolf Müller. 1996. "Sozialstrukturanalyse, Rational Choice Theorie und die Rolle der Zeit. Ein Versuch zur dynamischen Integration zweier Theorieperspektiven." *Soziale Welt* 47:382-410.

Bongaarts, John. 1982. "Infertility After Age 30: A False Alarm." *Family Planning Perspectives* 14:75-78.

—. 1997. "Trends in Unwanted Childbearing in the Developing World." *Studies in Family Planning* 28:267-277.

—. 1999a. "Fertility Decline in the Developed World: Where Will It End?" *The American Economic Review* 89:256-260.

—. 1999b. "The Fertility Impact of Changes in the Timing of Childbearing in the Developing World." *Population Studies* 53:277-289.

—. 2001. "Fertility and Reproductive Preferences in Post-Transitional Societies." *Population and Development Review* 27:260-281.
—. 2002. "The End of the Fertility Transition in the Developed World." *Population and Development Review* 28:419-443.
Bongaarts, John and Griffith Feeney. 1998. "On the Quantum and Tempo of Fertility." *Population and Development Review* 24:271-291.
Boudon, Raymond. 1986. *Theories of Social Change*. Oxford: Oxford University Press.
—. 1996. "The 'Rational Choice Model': A Particular Case of the 'Cognitive Model'." *Rationality and Society* 8:123-150.
—. 1998. "Limitations of Rational Choice Theory." *The American Journal of Sociology* 104:817-828.
Bourdieu, Pierre. 1977. *Outline of a Theory of Practice*. Cambridge: Cambridge University Press.
Bradshaw, Jonathan. 2005. "Child Benefit Packages in 22 Countries. Supplement to." in *(2002) A Comparison of Child Benefit Packages in 22 Countries*, vol. 174, edited by J. Bradshaw & N. Finch: Department for Work and Pensions Research Report 174.
Bradshaw, Jonathan and Naomi Finch. 2002. "A comparison of Child Benefit packages in 22 countries." *Department for Work and Pensions Research Report* 174.
Brentano, Lujo. 1909. "Die Malthussche Lehre und die Bevölkerungsbewegung der letzten Dezennien." in *Abhandlungen der Historischen Klasse der Königlich Bayerischen Akademie der Wissenschaft*, vol. 24. München: Verlag der Königlichen Bayerischen Akademie.
Brewster, Karin L. and Ronald R. Rindfuss. 2000. "Fertility and Women's Employment in Industrialized Nations." *Annual Review of Sociology* 26:271-296.
Brose, Hanns-Georg. 2003. "Die Subversion der Institution - Über Riesters Rente, lebenslanges Lernen und andere Kleinigkeiten." Pp. 583-603 in *Entstaatlichung und soziale Sicherheit. Verhandlungen des 31. Kongresses der Deutschen Gesellschaft für Soziologie in Leipzig 2002*, edited by J. Allmendinger. Opladen: Leske & Budrich.
Brose, Hanns-Georg and Bruno Hildenbrand. 1988. "Biographisierung von Erleben und Handeln." Pp. 11-30 in *Vom Ende des Individuums zur Individualität ohne Ende*, edited by H.-G. Brose & B. Hildenbrand. Opladen: Leske & Budrich.
Brown, Claire Rosemary. 1998. *Gender Segmentation of the Paid Work Force: The Case of Nursing*: Griffith University.
Brückner, Hannah and Karl Ulrich Mayer. 2005. "De-Standardization of the Life-Course: What it Might Mean? And if it Means Anything, Whether it Actually Took Place?" *Advances in Life Course Research* 9:27-54.
Brüderl, Josef and Thomas Klein. 1993. "Bildung und Familiengründungsprozeß deutscher Frauen: Humankapital-und Institutioneneffekt." Pp. 194-215 in *Der Familienzyklus als sozialer Prozeß: Bevölkerungssoziologische Untersuchungen mit den Methoden der Ereignisanalyse*, edited by A. Diekmann & S. Weick. Berlin: Duncker & Humblot.
Buchanan, Patrick J. 2002. *The Death if the West. How Dying Populations and Immigrant Invasions Imperil Our Country and Civilization* New York: Dunne Books.
Büchner, Charlotte , Peter Haan, Christian Schmitt, C. Katharina Spieß, and Katharina Wrohlich. 2006. *Wirkungsstudie Elterngeld. Gutachten des DIW Berlin im Auftrag des Bundesministeriums für Familie, Senioren, Frauen und Jugend*. Berlin: German Institute for Economic Research DIW.
Bumpass, Larry L. 1990. "What's Happening to the Family? Interactions Between Demographic and Institutional Change." *Demography* 27:483-498.
—. 2000. *Family-related attitudes, couple relationships, and union stability*. Madison-Wisconsin: Center for Demography and Ecology, University of Madison-Wisconsin.
Burkart, Günther. 1995. "Biographische Übergänge und rationale Entscheidungen." *BIOS - Zeitschrift für Biograühieforschung und Oral History*. 8:59-88.
Butz, William P. and Michael P. Ward. 1979. "The Emergence of Countercyclical U.S. Fertility." *The American Economic Review* 69:318-328.
Cain, Mead. 1976. "Aging and the Law." Pp. 342-368 in *Handbook of Aging in the Social Sciences*, edited by Binstock & Shanas. New York: Van Nostrand.

Caldwell, John, C. 1982. *Theory of Fertility Decline*. New York: Academic Press.
Carone, Guiseppe, Herwig Immervoll, Dominique Paturot, and Aino Salomäki. 2004. "Indicators of Unemployment and Low-Wage Traps (Marginal Effective Tax Rates on Labour)." *OECD Social, Employment and Migration Working Paper* 18.
Caspi, Avshalom and Daryl J. Bem. 1990. "Personality Continuity and Change Across the Life Course." Pp. 549–575 in *Handbook of Personality: Theory and Research*, edited by L. Pervin. New York: Guilford Press.
Chan, Tak Wing and Brendan Halpin. 2002. "Union Dissolution in the United Kingdom." *International Journal of Sociology* 32:76-93.
Charles, Maria. 1992. "Cross-National Variation in Occupational Sex Segregation." *American Sociological Review* 57:483-502.
Charles, Maria and David Grusky, B. 2004. *Occupational Ghettos. The Worldwide Segregation of Women and Men*. Stanford: Stanford University Press.
Chen, Renbao and S. Philip Morgan. 1991. "Recent Trends in the Timing of First Births in the United States." *Demography* 28:513-533.
Chen, Zhiqi and Frances Woolley. 2001. "A Cournot-Nash Model of Family Decision Making." *The Economic Journal* 111:722-748.
Chesnais, Jean-Claude. 1996. "Fertility, Family, and Social Policy in Contemporary Western Europe." *Population and Development Review* 22:729-739.
Cigno, Alessandro and John Ermisch. 1989. "A Microeconomic Analysis of the Timing of Births." *European Economic Review* 33:737-760.
Cliquet, Robert L. 1991. *The Second Demographic Transition: Fact or Fiction?* Strasbourg: Council of Europe.
Coale, Ansley and Susan Cotts Wattkins. 1986. *The Decline of Fertility in Europe. The Revised Proceedings of a Conference on the Princeton European Fertility Project*. Princeton: Princeton University Press.
Coleman, David. 2004. "Why we don't have to believe without doubting in the 'Second Demographic Transition." Pp. 11-24 in *Vienna Yearbook of Population Research 2004*, edited by G. Feichtinger. Wien: Austrian Academy of Sciences Press.
Coleman, James S. 1990. *Foundations of Social Theory*. Harvard: Belknap, Harvard University Press.
Coles, Melvyn and Randall Wright. 1994. "Dynamic bargaining theory." *Federal Reserve Bank Research Department Staff Report*.
Coppola, Lucia and Mariachiara Di Cesare. 2007. "How fertility and union stability interact in shaping new family patterns in Italy and Spain." *MPIDR Working Paper Series*.
Corsten, Michael and Steffen Hilmert. 2001. "Qualifikation, Berufseinstieg und Arbeitsmarktverhalten unter Bedingung erhöhter Konkurrenz. Was prägt Bildungs- und Erwerbsverläufe in den achtziger und neunziger Jahren?" *Working Paper des Projektes: Ausbildungs- und Berufsverläufe der Geburtskohorten 1964 und 1971 in Westdeutschland* 1.
Council of Europe. 2006. *Recent demographic developments in Europe 2005*. Strasbourg: Council of Europe Publishing.
D'Angelo, Denise V., Brenda Colley Gilbert, Roger W. Rochat, John S. Santelli, and Joan M. Herold. 2004. "Differences between Mistimed and Unwanted Pregnancies among Women Who Have Live Births." *Perspectives on Sexual and Reproductive Health* 36:192-197.
D´Ambrosio, Conchita. and C. Grandin. 2003. "Income Distribution and Social Exclusion of Children: Evidence From Italy and Spain in the 1990s." *Journal of Comparative Family Studies* 34:456-479.
Dahrendorf, Ralf. 1977. *Homo Sociologicus. 15. Edition*. Opladen: Westdeutscher Verlag.
Davidson, Andrew R. and Lee Roy Beach. 1981. "Error Patterns in the Prediction of Fertility Behavior." *Journal of Applied Social Psychology* 11:475-488.
De Bruijn, Bart Jan. 1999. *Foundations of demographic theory. Choice, process, context. Dissertation*: Rijksuniversiteit Groningen.
Demeny, Paul. 1986. "Population and the Invisible Hand." *Demography* 23:473-487.

Diekmann, Andreas and Thomas Voss. 2004. "Die Theorie rationalen Handelns. Stand und Perspektiven." Pp. 13-29 in *Rational-Choice-Theorien in den Sozialwissenschaften. Anwendungen und Probleme*, edited by A. Diekmann & T. Voss. München: Oldenbourg.

Dienel, Christiane. 2003. "Die Mutter und ihre erstes Kind - individuelle und staatliche Arrangements im europäischen Vergleich." *Zeitschrift für Familienforschung* 15:120-145.

Diewald, Martin and Karl Ulrich Mayer. 2008. "The Sociology of the Life Course and Life Span Psychology: Integrated Paradigm or Complementing Pathways?" *CIQLE Working Paper 2008-01*.

Diewald, Martin and Stephanie Sill. 2004. "Mehr Risiken, mehr Chancen? Trends in der Arbeitsmarktmobilität seit Mitte der 1980er Jahre." Pp. 39-62 in *Beschäftigungsstabilität im Wandel*, edited by O. Struck & C. Köhler. München: Hampp.

Dingeldey, Irene. 2002. "Das deutsche System der Ehegattenbesteuerung im europäischen Vergleich." *Hans Böckler Stiftung: WSI Mitteilungen* 3:154-160.

DiPrete, Thomas A. 2002. "Life Course Risks, Mobility Regimes, and Mobility Consequences: A Comparison of Sweden, Germany, and the United States." *American Journal of Sociology* 108:267-309.

DiPrete, Thomas A., Dominique Goux, Eric Maurin, and Amelie Quesnel-Vallee. 2006. "Work and Pay in Flexible and Regulated Labor Markets: A Generalized Perspective on Institutional Evolution and Inequality Trends in Europe and the U.S." *Research in Social Stratification and Mobility* 24:311-332.

DiPrete, Thomas A. and Patricia A. McManus. 2000. "Family Change, Employment Transitions, and the Welfare State: Household Income Dynamics in the United States and Germany." *American Sociological Review* 65:343-370.

DiPrete, Thomas A., Philip S. Morgan, Henriette Engelhardt, and Hana Pacalova. 2003. "Do Cross-National Differences in the Costs of Children Generate Cross-National Differences in Fertility Rates?" *Population Research and Policy Review* 22:439-477.

Dorbritz, Jürgen. 1998. "Trends der Geburtenhäufigkeit in Niedrig-Fertilitäts-Ländern und Szenarien der Familienbildung in Deutschland." *Zeitschrift für Bevölkerungswissenschaft.* 23:179-210.

—. 2005. "Kinderlosigkeit in Deutschland und Europa - Daten, Trends und Einstellungen." *Zeitschrift für Bevölkerungswissenschaft* 30:359-408.

Dorbritz, Jürgen, Andrea Lengerer, and Kerstin Ruckdeschel. 2005. *Einstellungen zu demographischen Trends und zu bevölkerungsrelevanten Politiken*. Wiesbaden.

Dornseiff, Jann-Michael and Reinhold Sackmann. 2003. "Familien-, Erwerbs- und Fertilitätsdynamiken in Ost- und Westdeutschland." Pp. 309-348 in *Partnerschaft und Familiengründung. Ergebnisse der dritten Welle des Familien-Survey.*, vol. 11, edited by W. Bien & J. H. Marbach. Opladen: Leske & Budrich.

Drobnic, Sonja and Hans-Peter Blossfeld. 2004. "Career Patterns Over The Life-Course: Gender, Class, and Linked Lives." *Research in Social Stratification and Mobility* 21:139-164.

Drobnic, Sonja, Hans-Peter Blossfeld, and Götz Rohwer. 1999. "Dynamics of Women's Employment Patterns over the Family Life Course: A Comparison of the United States and Germany." *Journal of Marriage and the Family* 61:133-146.

Easterlin, Richard A. 1962. *The American Baby Boom in Historical Perspective*. New York: National Bureau of Economic Research, Occasional Paper 79.

—. 1966. "Economic-Demographic Interactions and Long Swings in Economic Growth." *The American Economic Review* 56:1063-1104.

—. 1975. "An Economic Framework for Fertility Analysis." *Studies in Family Planning* 6:54-63.

—. 1976. "The Conflict between Aspirations and Resources." *Population and Development Review* 2:417-425.

Easterlin, Richard A. and Eileen M. Crimmins. 1985. *The Fertility Revolution: A Supply-Demand Analysis*. Chicago: University of Chicago Press.

Echevarria, Cristina and Antonio Merlo. 1999. "Gender Differences in Education in a Dynamic Household Bargaining Model." *International Economic Review* 40:265-286.

Eckhard, Jan. 2006. "Kinderlosigkeit durch Partnerschaftslosigkeit. Der Wandel der Partnerschaftsbiographien und Zusammenhänge mit der Geburtenentwicklung." *Zeitschrift für Bevölkerungswissenschaft* 31:105-126.

Elder, Glen H. Jr. 1974. *Children of the Great Depression*. Chicago: University of Chicago.

—. 1978. "Approaches to Social Change and the Family." *The American Journal of Sociology* 84:1-38.

—. 1991. "Lives and Social Change." Pp. 58-86 in *Theoretical advances in life course research*, edited by W. R. Heinz. Weinheim.

—. 1992. "Models of the Life Course." *Contemporary Sociology* 21:632-635.

—. 1994. "Time, human agency and social change: Perspectives on the life course." *Social Psychology Quarterly* 57:4-15.

—. 1995. "The Life Course Paradigm: Social Change and Individual Development." Pp. 101-139 in *Examining Lives in Context: Perspectives on the Ecology of Human Development. Essays in Honor of Urie Bronfenbrenner*, edited by P. Moen, G. H. J. Elder & K. Lüscher. Washington, DC: American Psychological Association Press.

Engelhardt, Henriette and Alexia Prskawetz. 2004. "On the Changing Correlation between Fertility and Female Employment over Space and Time." *European Journal of Population* 20:35-62.

England, Paula. 2005. "Gender Inequality in Labor Markets: The Role of Motherhood and Segregation." *Social Politics* 12:264-288.

England, Paula and Michelle J. Buding. 1997. "Gary Becker on the Family: His Genius, Impact, and Blind Spots." Pp. 95-111 in *Required Reading: Sociology's Most Influential Books*, edited by D. Clawson. Amherst, MA: University of Massachusetts Press.

Engstler, Heribert and Sonja Menning. 2003. *Die Familie im Spiegel der amtlichen Statistik. Lebensformen, Familienstrukturen, wirtschaftliche Situation der Familien und familiendemografische Entwicklung in Deutschland. Erweiterte Neuauflage 2003. Berlin.*

Erikson, Robert and John H. Goldthorpe. 1992. *The constant flux. A study of class mobility in industrial societies.* Oxford: Clarendon.

Erlinghagen, Marcel and Matthias Knuth. 2002. "Auf der Suche nach dem "Turbo-Arbeitsmarkt". Zwischenbericht an die Deutsche Forschungsgemeinschaft (DFG) zum Projekt "Restrukturierung des Arbeitsmarktes"." *Graue Reihe des Instituts Arbeit und Technik* 3.

—. 2004. "The Evolution of Labour Market Dynamics in West Germany from the Doom of Industrialism to the Dawn of the Service Economy." *Economia & Lavoro* 38:91-113.

Ermisch, John. and David J. Pevalin. 2003. "Who has a Child as a Teenager?" *ISER Working Paper Series* 30.

Eskenazi, Brenda, Andrew J. Wyrobek, E. Sloter, and S.A.& Moore Kidd, L.& Young, S.& Moore, D. 2003. "The association of age and semen quality in healthy men." *Human Reproduction.* 18:447-454.

Esping-Andersen, Gosta. 1990. *The Three Words of Welfare Capitalism. Cambridge*. Polity Press.

—. 1996. "Welfare States without Work: The Impasse of Labour Shedding and Familialism in Continental European Social Policy." Pp. 66-87 in *Welfare States in Transition. National Adaptions in Global Economies*, edited by G. Esping-Andersen. London: Sage.

—. 1999. *Social Foundations of Postindustrial Economies*. Oxford University Press.

Eswaran, Mukesh. 2002. "The Empowerment of Women, Fertility, and Child Mortality: Towards a theoretical Analysis." *Journal of Population Economics* 15:433-454.

Eurobarometer. 1990. "Desire for Children (Special Issue)." *Eurobarometer* 32.

Eurofund. 2007. *Industrial Relations in the Public Sector. Online Reference: http://www.eurofound.europa.eu/docs/eiro/tn0611028s/tn0611028s.pdf*. Dublin: European Foundation for the Improvement of Living and Working Conditions.

European Communities. 2003. *50 years of figures on Europe*. Luxembourg: Office for Official Publications of the European Communities.

European Parliament. 1996. "Social Policy in Finland - an Overview." *Directorate-General for Research. Working Document. Social Affairs Series* W9.

Eurostat. 2007. "Eurostat Structural Indicators -General Economic Background. GDP per capita in PPS." Eurostat. Statistical Office of the European Communities.

Fahey, Tony. 2001. "Trends in Irish Fertility Rates in Comparative Perspective." *The Economic and Social Review* 32:153-180.

Fehr, Ernst and Klaus M. Schmidt. 2006. "The Economics of Fairness, Reciprocity and Altruism - Experimental Evidence and New Theories." in *Handbook of Economics of Giving, Altruism and Reciprocity. Foundations*, vol. 1, edited by S.-C. Kolm & J. M. Ythier. Amsterdam, Boston: Elsevier.

Fehr, Ernst and Gachter Simon. 2000. "Fairness and Retaliation: The Economics of Reciprocity." Pp. 159-181, vol. 14: American Economic Association.

Feldhaus, Michael and Johannes Huinink. 2006. "Panel Analysis of Initimate Relationships and Family Dynamics (PAIRFAM) Why we need it and what it is about." *pairfam Working Paper Series No. 6. University of Bremen*.

Ferber, Marianne A. and Bonnie G. Birnbaum. 1977. "The "New Home Economics:" Retrospects and Prospects." *The Journal of Consumer Research* 4:19-28.

Ferrera, Maurizio. 1996. "The 'Southern Model' of Welfare in Social Europe." *Journal of European Social Policy* 6:17-37.

Finch, Naomi and Jonathan Bradshaw. 2003. "Fertility and Supporting the Costs of Children." *Paper prepared for the Conference on Recent Fertility Trends in Northern Europe, May 15th-16th, 2003, Oslo*.

Fiorina, Morris P. 1977. "An Outline for a Model of Party Choice." *American Journal of Political Science* 21:601-625.

—. 1981. *Retrospective Voting in American National Elections.* New Haven: Yale University Press.

Fishbein, Martin and Icek Ajzen. 1975. *Belief, Attitude, Intention, and Behaviour: An Introduction to Theory and Research*. Addison MA: Wesley.

Fishbein, Martin, James J. Jaccard, Andrew R. Davidson, Icek Ajzen, and Barbara Loken. 1980. "Predicting and Understanding Family Planning Behaviors: Beliefs, Attitudes and Intentions." Pp. 130-147 in *Understanding Attitudes and Predicting Social Behaviour*, edited by I. Ajzen & M. Fishbein. Upper Saddle River: Prentice Hall.

Friedman, Debra, Michael Hechter, and Satoshi Kanazawa. 1994. "A Theory of the Value of Children." *Demography* 31:375-401.

—. 1999. "Theories of the Value of Children: A New Approach." Pp. 19-47 in *The Dynamics of Values in Fertility Change*, edited by R. Leete: Oxford University Press.

Fuwa, Makiko. 2004. "Macro-Level Gender Inequality and the Division of Household Labor in 22 Countries." *American Sociological Review* 69:751-767.

Fuwa, Makiko and Philip N. Cohen. 2007. "Housework and Social Policy." *Social Science Research* 36:512-530.

Gangl, Markus. 2006. "Scar Effects of Unemployment: An Assessment of Institutional Complementarities." *American Sociological Review* 71:986-1013.

Garfinkel, Irwin, Sara S. McLanahan, and Thomas L. Hanson. 1998. "A Patchwork Portrait of Nonresident Fathers." *Center for Research on Child Wellbeing Working Paper Series* 25.

Gauthier, Anne H. 2002. "Family Policies in Industrialized Countries: Is There Convergence?" *Population (English Edition, 2002-)* 57:447-474.

Gauthier, Anne Helene and Jan Hatzius. 1997. "Family Benefits and Fertility: An Econometric Analysis." *Population Studies* 51:295-306.

Geist, Claudia. 2005. "The Welfare State and the Home: Regime Differences in the Domestic Division of Labour." *European Sociological Review* 21:23-41.

Gerber, Alan S., Donald P. Green, and Ron Shachar. 2003. "Voting May Be Habit-Forming: Evidence from a Randomized Field Experiment." *American Journal of Political Science* 47:540-550.

Giddens, Anthony. 1992. *The Transformation of Intimacy. Sexuality, Love & Eroticism in Modern Societies*. Cambridge: Polity Press.

Goldstein, Joshua R., Wolfgang Lutz, and Rita Maria Testa. 2003. "The Emergence of Sub-Replacement Family Size Ideals in Europe." *Population Research and Policy Review* 22:479-496.

Golsch, Kathrin. 2004. *The Impact of Labour Market Insecurity on the Work and Family Life of Men and Women. A Comparison of Germany, Great Britain and Spain. Dissertation*. Bielefeld: University of Bielefeld.

Gornic, Jennifer. C., M. K. Meyers, and K. E. Ross. 1996. "Public Policies and the Employment of Mothers: A Cross-National Study." *Luxemburg Income Study, Working Paper Series* 140.

Gouldner, Alvin W. 1960. "The Norm of Reciprocity: A Preliminary Statement." Pp. 161-178, vol. 25: American Sociological Association.

Greene, Margaret. E. and A.E. Biddlecom. 2000. "Absent and problematic men: Demographic accounts of male reproductive roles." *Population and development review* 26:81-115.

Günther, Roland. 2003. "Report on compiled information." *Chintex Working Paper Series* 19.

Gustafsson, Siv S. 2001. "Optimal Age at Motherhood. Theoretical and Empirical Considerations on Postponement of Maternity in Europe." *Journal of Population Economics* 14:225-247.

Haag, Antoine and Jean-Marie Jungblut. 2001. "The Changing of Labour Market Patterns during the Nineties in Germany, France, United Kingdom and United States." in *ISA Research Committee on Social Stratification (RC28)*. Mannheim

Haapakorpi, Arja. 1995. "The Recession in Finland and the Labour Market for Academic Degree Holders." *European Journal of Education* 30:105-110.

Hagestad, Gunhild O. 1991. "Trends and dilemmas in life course research: An international perspective." Pp. 23-57 in *Theoretical advances in life course research.*, edited by W. R. Heinz. Weinheim.

Hagestad, Gunhild O. and Vaughn R. A. Call. 2007. "Pathways to Childlessness. Al Life Course Perspective." *Journal of Family Issues* 28:1338.

Hakim, Catherine. 1997. "A Sociological Perspective on Part-Time Work." Pp. 22-70 in *Between Equalization and Marginalization. Women Working Part-Time in Europe and the United States of America*, edited by H.-P. Blossfeld & C. Hakim. Oxford: Oxford University Press.

—. 2000. *Work-Lifestyle Choices in the 21st Century. Preference Theory*: Oxford University Press.

—. 2003. "A New Approach to Explaining Fertility Patterns: Preference Theory." *Population and Development Review* 29:349-374.

Hall, Peter A. and David Soskice. 2001. "An Introduction to Varieties of Capitalism." Pp. 1-70 in *Varieties of Capitalism. The Institutional Foundations of Comparative Advantage*, edited by P. A. Hall & D. Soskice. Oxford: Oxford University Press.

—. 2003. "Varieties of Capitalism and Institutional Change: A Response to Three Critics." *Comparative European Politics* 1.

Hammel, E. A. 1990. "A Theory of Culture for Demography." *Population and Development Review* 16:455-485.

Hank, Karsten. 2002. "Regional Social Contexts and Individual Fertility Decisions: A Multilevel Analysis of First and Second Births in Western Germany." *European Journal of Population* 18:281-299.

Hank, Karsten and Angelika Tölke. 2006. "Männer - Das 'vernachlässigte' Geschlecht in der Familienforschung: Untersuchungen zu Elternschaft und Partnerschaft bei Männern." Pp. 7-17 in *Männer - Das 'vernachlässigte' Geschlecht in der Familienforschung. Sonderheft 4 der Zeitschrift für Familienforschung*, edited by A. Tölke & K. Hank. Wiesbaden: VS Verlag.

Hank, Karsten., Michaela. Kreyenfeld, and C.Katharina. Spieß. 2004. "Kinderbetreuung und Fertilität in Deutschland." *Zeitschrift für Soziologie* 33:228-244.

Happel, S. K., J. K. Hill, and S. A. Low. 1984. "An economic analysis of the timing of childbirth." *Population Studies* 38:299-311.

Hechter, Michael and Satoshi Kanazawa. 1997. "Sociological Rational Choice Theory." *Annual Review of Sociology* 23:191-214.

Helfferich, Cornelia. 2000. "Frauen Leben. Eine Studie zu Lebensläufen und Familienplanung." edited by B. f. g. Aufklärung. Köln,: Bundeszentrale für gesundheitliche Aufklärung.

Henshaw, Stanley K. 1998. "Unintended Pregnancy in the United States." *Family Planning Perspectives* 30:24-46.

Hershey, John C. and Paul J. H. Schoemaker. 1985. "Probability versus Certainty Equivalence Methods in Utility Measurement: Are They Equivalent?" *Management Science* 31:1213-1231.

Hill, Paul B. and Johannes Kopp. 2000. "Fertilitätsentwicklung: Trends, Erklärungen und empirische Ergebnisse." Pp. 729-750 in *Handbuch der Demographie*, edited by U. Mueller, B. Nauck & A. Diekmann. Berlin, New York: Springer.

Hobcraft, John. 2004. "Method, theory, and substance in understanding choices about becoming a parent: Progress or regress?. Discussion of paper 'Explanations of the fertiity in modern soicieties: A search for commonalities' by John Caldwell and Thomas Schindlmayr." *Population Studies* 58:81-84.

Hobcraft, John and Kathleen E. Kiernan. 1995. "Becoming a Parent in Europe." *Prepared Paper: European Population Conference, September 4-8, 1995, Milano, Italy*.

Hoem, Britta. 2000. "Entry into motherhood in Sweden: the influence of economic factors on the rise and fall in fertility, 1986-1997." *Demographic Research* 2.

Hoem, Britta and Jan M. Hoem. 1999. "Fertility Trands in Sweden up to 1996." *Population Bulletin (United Nations)* 40/41:318-333.

Hoem, Jan M. 1993. "Public Policy as the Fuel for Fertility: Effects of a Policy Reform on the Pace of Childbearing in Sweden in the 1980s." *Acta Sociologica* 36:19-31.

—. 2005. "Why does Sweden have such high fertility?" *Demographic Research. Online Journal.* *http://www.demographic-research.org/volumes/vol13/22/13-22.pdf* 13:559-572.

Hoem, Jan M., Gerda Neyer, and Gunnar Andersson. 2006. "Educational attainment and ultimate fertility among Swedish women born in 1955-59." *Demographic Research* 14.

Hoffman, Lois Wladis. 1987. "The Value of Children to Parents and Childrearing Patterns." Pp. 159-170 in *Growth and Progress in Cross-Cultural Psychology*, edited by C. Kagitcibasi. Berwyn, Lisse: Swts & Zeitlinger.

Hoffman, Lois Wladis and Martin L. Hoffman. 1973. "The Value of Children to Parents." Pp. 19-76 in *Psychological Perspectives on Population*, edited by J. T. Fawcett. New York: Basic Books.

Hofstede, Geert H. 2001. *Culture's Consequence. Comparing Values, Behaviours, Institutions and Organizations Across Nations*. Thousand Oaks: Sage.

Höllinger, Franz. 1991. "Frauenerwerbstätigkeit und Wandel der Geschlechtsrollen im internationalen Vergleich." *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 43.

Homans, George Caspar. 1974. *Social behaviour. Its elementary forms. Revised Edition*. New York: Harcourt.

Hondrich, Karl-Otto. 2007. *Weniger sind mehr*: Campus.

Hook, Jennifer. 2006. "Care in context: Men's unpaid work in 20 countries, 1965-2003." *American Sociolgoical Review* 71:639-660.

Huinink, Johannes. 1991. "Familienentwicklung in der Bundesrepublik Deutschland." Pp. 289-317 in *Vom Regen in die Traufe: Frauen zwischen Beruf und Familie*, edited by J. Allmendinger, J. Huinink & K. U. Mayer. Frankfurt a.M/. New York: Campus.

—. 2000. "Soziologische Ansätze zur Bevölkerungsentwicklung." Pp. 338-386 in *Handbuch der Demographie - Modelle und Methoden*, edited by U. Müller, B. Nauck & A. Diekmann. Berlin, Heidelberg: Springer.

—. 2001a. "Entscheidungs- und Vereinbarkeitsprobleme bei der Wahl familialer Lebensformen." Pp. 145-165 in *Solidarität in Partnerschaft und Familie. Zum Stand familiensoziologischer Theoriebildung*, edited by J. Huinink, K. P. Strohmeier & M. Wagner. Würzburg: Ergon-Verlag.

—. 2001b. "The Macro-Micro-Link in Demography - Explanations of Demographic Change." in *Euro-Conference: The Second Demographic Transition in Europe*. Bad Herrenalb, Germany.

—. 2002. "Polarisierung der Familienentwicklung in europäischen Ländern im Vergleich." Pp. 49-75 in *Elternschaft heute. Gesellschaftliche Rahmenbedingungen und individuelle Gestaltungsaufgaben. Sonderheft der Zeitschrift für Familienforschung*, edited by N. F. Schneider & H. Matthias-Bleck. Opladen: Leske & Budrich.

Huinink, Johannes and Michaela Kreyenfeld. 2004. "Family Formation in Times of Social and Economic Change: An Analysis of the 1971 East German Cohort." *MPIDR Working Paper Series* 13.

Huinink, Johannes and Karl Ulrich Mayer. 1995. "Gender, Social Inequality, and Family Formation in West Germany." Pp. 168-199 in *Gender and Family Change in Industrialized Countries*, edited by K. O. Mason & A.-M. Jensen. Oxford: Oxford University Press.

Hurrelmann, Klaus and Mathias Albert. 2002. *Jugend 2002. 14. Shell-Jugendstudie*. Frankfurt/Main: Fischer.

ILO Bureau of Statistics. 2007. "LABORSTA. Public Employment Database. Online Reference: http://laborsta.ilo.org/ Access date: 02/10/2007." International Labour Office.

Inglehart, Ronald and Christian Welzel. 2005. *Modernization, Cultural Change, and Democracy. The Human Development Sequence*. Cambridge: Cambridge University Press.

Jacob, Marita. 2004. "Hält "doppelt gemoppelt" wirklich besser?" *IAB Kurzbericht* 16:1-4.

Jenkins, Stephen. P. 2005. *Survival Analysis*. Colchester: ISER Universtiy of Essex.

Jenkins, Stephen. P., C. Schluter, and Gert G. Wagner. 2003. "The Dynamics of Child Poverty: Britain and Germany Compared." *Journal of comparative family studies* 34:337-356.

Joyce, Ted , Robert Kaestner, and Sanders Korenman. 2000. "The Stability of Pregnancy Intentions and Pregnancy-Related Maternal Behaviors." *Maternal and Child Health Journal* 4:171-178.

Juby, Heather and Celine Le Bourdais. 1998. "The Changing Context of Fatherhood in Canada: A Life Course Analysis." *Population Studies* 52:163-175.

Kahneman, Daniel and Amos Tversky. 1979. "Prospect Theory: An Analysis of Decision under Risk." *Econometrica* 47:263-292.

Kalmijn, Matthijs. 1998. "Intermarriage and Homogamy: Causes, Patterns, Trends." *Annual Review of Sociology* 24:395-421.

—. 2003. "Country Differences in Sex-Role Attitudes: Cultural and Economic Explanations." Pp. 311-337 in *The Cultural Diversity of European Unity. Findings, Explanations and Reflections from the European Values Study*, edited by W. Arts, J. Hagenaars & L. Halman. Leiden, Boston: Brill.

Kamerman, Sheila B. 2000. "Parental leave policies: An essential ingredient in early childhood education and care policies." *Social Policy Report* 14:3-15.

Kangas, Oli and Tine Rostgaard. 2007. "Preferences or Institutions? Work Family Opportunities in Seven European Countries." *Journal of European Social Policy* 17:240-256.

Kassner, Karsten and Anneli Rüling. 2005. "'Nicht nur am Samstag gehört Papa mir!' – Väter in egalitären Arrangements von Arbeit und Leben." Pp. 235-264 in *Männer – Das 'vernachlässigte' Geschlecht in der Familienforschung. Sonderheft 4 der Zeitschrift für Familienforschung*, edited by A. Tölke & K. Hank. Wiesbaden: VS-Verlag für Sozialswissenschaften.

Kelle, Udo and Christian Lüdemann. 1995. "Grau, teurer Freund ist alle Theorie... Rational Choice und das Problem der Brückenannahmen." *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 47:249-267.

Kiernan, Kathleen E. 1997. "Becoming a Young Parent: A Longitudinal Study of Associated Factors." *The British Journal of Sociology* 48:406-428.

Kim, Anna and Karin Kurz. 2003. "Prekäre Beschäftigungsverhältnisse in Großbritannien und Deutschland. Welche Rolle spielen unterschiedliche institutionelle Kontexte? ." Pp. 167-197 in *Mehr Risiken – Mehr Ungleichheit? Abbau des Wohlfahrtsstaates, Flexibilisierung des Arbeitsmarktes und die Folgen*, edited by W. Müller & S. Scherer. Frankfurt/Main: Campus.

Kim, Young J. and Robert Schoen. 2000. "On the Quantum and Tempo of Fertility: Limits to the Bongaarts-Feeney Adjustment." *Population and Development Review* 26:554-559.

Kirk, Dudley. 1996. "Demographic Transition Theory." *Population Studies* 50:361-387.

Kiser, Clyde V. 1979. "Comments on "Fertility as Consumption: Theories from the Behavioral Sciences"." *The Journal of Consumer Research* 5:284-287.

Klaus, Daniela, Bernhard Nauck, and Thomas Klein. 2005. "Families and the Value of Children in Germany." Pp. 17-41 in *The Value of Children in Cross-Cultural Perspective. Case Studies From Eight Societies*, edited by G. Trommsdorff & B. Nauck. Berlin: Pabst.

Klein, Thomas. 2003. "Die Geburt von Kindern in paarbezogener Perspektive." *Zeitschrift für Soziologie* 32:506-527.

Klein, Thomas and Wolfgang Lauterbach. 1994. "Bildungseinflüsse auf Heirat, die Geburt des Ersten Kindes und die Erwerbsunterbrechung von Frauen. Eine empirische Analyse familienökonomischer Erklärungsmuster." *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 46:278-298.

Klein, Thomas, Yasemin Niephaus, Heike Diefenbach, and Johannes Kopp. 1996. "Entwicklungsperspektiven von Elternschaft und Ehelicher Stabilität in den neuen Bunesländern seit 1989." in *Familie an der Schwelle zum Neuen Jahrtausend. Wandel und Entwicklung Familialer Lebensformen*, edited by W. Bien. Opladen: Leske & Budrich.

Klijzing, Erik. 2000. "Are There Unmet Family Planning Needs in Europe?" *Family Planning Perspectives* 32:74-88.

Kluckhohn, Clyde. 1951. "The Study of Culture." Pp. 86-101 in *The Policy Scienece*, edited by D. Lerner & H. D. Lasswell. Stanford: Stanford University Press.

Kögel, Tomas. 2002. "Did the Association between Fertility and Female Employment within OECD Countries Really Change its Sign?" *MPIDR Working Paper Series* 34.

Kohler, Hans-Peter, Francesco C. Billari, and Jose Antonio Ortega. 2002. "The Emergence of Lowest-Low Fertility in Europe during the 1990s." *Population and Development Review* 28:641-680.

—. 2006. "Low Fertility in Europe: Causes, Implications and Policy Options." Pp. 48-109 in *The Baby Bust: Who will do the Work? Who Will Pay the Taxes?*, edited by F. R. Harris. Lanham, MD: Rowman & Littlefield.

Kohler, Hans-Peter and Jose Antonio Ortega. 2002. "Tempo-Adjusted Period Parity Progression Measures: Assessing the Implications of Delayed Childbearing for Cohort Fertility in Sweden, the Netherlands and Spain." *Demographic Research* 6:145-190.

Kohli, Martin. 1985. "Die Institutionalisierung des Lebenslaufs. Historische Befunde und theoretische Argumente." *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 37:1-29.

—. 1986. "Der Lebenslauf im Strukturwandel der Moderne." Pp. 183-207 in *Die Moderne - Kontinuität und Zäsuren*, edited by J. Berger. Göttigen: Schwartz.

—. 1988. "Normalbiographie und Individualität: Zur institutionellen Dynamik des gegenwärtigen Lebenslaufregimes." Pp. 33-53 in *Vom Ende des Individuums zur Individualität ohne Ende*, edited by H.-G. Brose & B. Hildenbrand.

—. 1991. "Lebenslauftheoretische Ansätze in der Sozialisationsforschung." Pp. 303-317 in *Neues Handbuch der Sozialisationsforschung*, edited by K. Hurrelmann & D. Ulich. Weinheim, Basel: Beltz.

Kohn, Melvin. L. 1987. *Cross-National Research in Sociology*. Newbury Park, London, New Dehli: Sage.

Konrad, Kai A. and Kjell Erik Lommerud. 2000. "The Bargaining Family Revisited." *The Canadian Journal of Economics / Revue canadienne d'Economique* 33:471-487.

Köppen, Katja, Magali Mazuy, and Laurent Toulemon. 2007. "Kinderlosigkeit in Frankreich." Pp. 83-104 in *Ein Leben ohne Kinder. Kinderlosigkeit in Deutschland*, edited by D. Konietzka & M. Kreyenfeld. Wiesbaden: VS-Verlag.

Kost, Kathryn and Jacqueline Darroch Forrest. 1995. "Intention Status of U.S. Births in 1988: Differences by Mothers' Socioeconomic and Demographic Characteristics." *Family Planning Perspectives* 27:11-17.

Kramer, Walter and Klaus Neusser. 1984. "The Emergence of Countercyclical U.S. Fertility: Note." *The American Economic Review* 74:201-202.

Kravdal, Oystein. 1996. "How the Local Supply of Day-Care Centers Influences Fertility in Norway: A Parity Specific Approach." *Population Research and Policy Review* 15:201-218.

—. 2002. "The impact of individual and aggregate unemployment on fertility in Norway." *Demographic Research* 6.

Kreyenfeld, Michaela. 2000. "Changes in the timing of first birth in East Germany after re-unification." *Schmollers Jahrbuch* 120:169-186.
—. 2001. "Timing of First Births in East Germany after Reunification." *Vierteljahreshefte zur Wirtschaftsforschung* 70:74-79.
—. 2002. "Time-squeeze, partner effect or self-selection? An investigation into the positive effect of women's education on second birth risks in West Germany." *Demographic Research* 7:15-48.
—. 2005a. "Economic Uncertainty and Fertility Postponement. Evidence from German Panel Data." in *Presentation Prepared for the Meeting of the Verein für Socialpolitik*. Bonn.
—. 2005b. "Economic Uncertainty and Fertility Postponement: Evidence from German Panel Data." *MPIDR Working Paper Series* 34.
Kreyenfeld, Michaela and Johannes Huinink. 2003. "Der Übergang zum ersten und zweiten Kind. Ein Vergleich zwischen Familiensurvey und Mikrozensus." Pp. 43-64 in *Partnerschaft und Familiengründung. Ergebnisse der dritten Welle des Familien-Survey.*, vol. 11, edited by W. Bien & J. H. Marbach. Opladen: Leske & Budrich.
Kroneberg, Clemens. 2007. "Value Rationality and the Model of Frame Selection." *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 59:215-240.
Kroska, Amy. 1997. "The division of labor in the home: A review and reconceptualization." *Social Psychology Quarterly* 60:304-322.
Kühn, Thomas. 2001. "Die Planung der Familiengründung. Verschiedene Entwicklungsverläufe in den ersten Berufsjahren." *Zeitschrift für Familienforschung.* 13:29-48.
Kurz, Karin. 2002. "Fixed-term contracts and unemployment at the beginning of the employment career in Germany: does gender matter?" Pp. 133-157 in *The gender dimension of social change. The contribution of dynamic research to the study of women's life courses*, edited by E. Ruspini & A. Dale. London: Polity Press.
Kurz, Karin, Nikolei Steinhage, and Kathrin Golsch. 2001. "Case Study Germany: Global Competition, Uncertainty and the Transition to Adulthood." *Globalife Working Paper* 16.
Kurz, Karin, Nikolei Steinhage, and Katrin Golsch. 2005. "Case Study Germany: Uncertainty and the Transition to Adulthood." Pp. 51-81 in *Globalization and Youth in Society*, edited by H.-P. Blossfeld, E. Klijzing, M. Mills & K. Kurz. London: Routledge.
Lalive, Rafael and Josef Zweimüller. 2005. "Does Parental Leave Affect Fertility and Return-to-Work? Evidence from a "True Natural Experiment"." *IZA Discussion Paper Series* 1613.
Langan, Mary and Ilona Ostner. 1991. "Gender and Welfare. Towards a Comparative Framework." Pp. 127-150 in *Towards a European Welfare State?*, edited by G. Room. Bristol: School of Advanced Urban Studies.
Laroque, Guy and Bernard Salanié. 2003. "Fertility and Financial Incentives in France." *Centre for Economic Policy Research (CEPR) Discussion Paper Series* 4064.
Lauterbach, Wolfgang. 1994. *Berufsverläufe von Frauen: Erwerbstätigkeit, Unterbrechung und Wiedereintritt. Reihe: Lebensverläufe und gesellschaftlicher Wandel*. Frankfurt/Main: Campus.
Lehrer, Evelyn L., Shoshana Grossbard-Shechtman, and J. William Leasure. 1996. "Comment on "A Theory of the Value of Children"." *Demography* 33:133-136.
Leibenstein, Harvey. 1957. *Economic backwardness and economic growth*. New York: Wiley & Sons.
—. 1974. "An Interpretation of the Economic Theory of Fertility: Promising Path or Blind Alley?" *Journal of Economic Literature* 12:457-479.
—. 1975. "The Economic Theory of Fertility Decline." *The Quarterly Journal of Economics* 89:1-31.
—. 1979. "Comments on "Fertility as Consumption: Theories from the Behavioral Sciences"." *The Journal of Consumer Research* 5:287-290.
—. 1981. "Economic Decision Theory and Human Fertility Behavior: A Speculative Essay." *Population and Development Review* 7:381-400.
Leridon, Henri. 1990. "Extra-Marital Cohabitation and Fertility." *Population Studies* 44:469-487.
Lesthaeghe, Ron and Guy Moors. 2000. "Recent Trends in Fertility and Household Formation in the Developed World." *Review of Population and Social Policy* 9:121-170.

Lesthaeghe, Ron and Lisa Neidert. 2007. "Der "Zweite Demographische Übergang" in den USA: Ausnahme oder Lehrbuchbeispiel?" *Zeitschrift für Bevölkerungswissenschaft* 32:381-428.

Lesthaeghe, Ron and Johan Surkyn. 1988. "Cultural Dynamics and Economic Theories of Fertility Change." *Population and Development Review* 14:1-45.

—. 2006. "When History moves on: Foundations and Diffusion of a Second Demographic Transition." in *International Family Change: Ideational Perspectives*, edited by R. Jayakody, A. Thornton & W. G. Axinn. Mahwah N.J.: Lawrence Earlbaum and Associates.

Lesthaeghe, Ron and Dirk J. van de Kaa. 1986. "Twee demografische transities?" Pp. 9-24 in *Bevolking - Groei en Krimp, Mens en Maatschappij*, edited by R. Lesthaeghe & D. J. van de Kaa. Deventer: Van Longhum Slaterus.

Lesthaeghe, Ron and Paul Willems. 1999. "Is Low Fertility a Temporary Phenomenon in the European Union?" *Population and Development Review* 25:211-228.

Levy, Rene. 1991. "Status passages as critical life course transitions." Pp. 87-114 in *Theoretical advances in life course research*, edited by W. R. Heinz. Weinheim.

Levy, René. 1996. "Zur Institutionalisierung von Lebensläufen." Pp. 73-113 in *Kritische Übergänge: Statuspassagen und sozialpolitische Institutionalisierungen.*, edited by J. Behrens & W. Voges. Frankfurt a.M/. New York: Campus.

Lewis, Jane. 1992. "Gender and the Development of Welfare Regimes." *Journal of European Social Policy* 2:159-173.

Lewis, Jane and Ilona Ostner. 1994. "Gender and the Evolution of European Social Policy." *University of Bremen. Centre for Social Policy Research (ZeS). Working Paper Series* 4.

Liefbroer, Aart C. 1991. "The Choice Between a Married or Unmarried First Union by Young Adults. A Competing Risk Analysis." *European Journal of Population* 7:273-298.

Liefbroer, Aart C. and Martine Corijn. 1999. "Who, What, Where and When? Specifying the Impact of Educational Attainment and Labour Force Participation on Family Formation." *European Journal of Population.* 15:45-75.

Lindenberg, Siegwart. 1985. "An Assessment of the New Political Economy. Its Potential for the Social Sciences and for Sociological Theory in Particular." *Sociological Theory* 3:99-114.

—. 1986. "Individual Economic Ignorance versus Social Production Functions and Precarious Enlightenment." *Journal of Institutional and Theoretical Economics* 142:20-26.

—. 1989. "Choice and Culture: The Behavioral Basis of Cultural Impact on Transactions." Pp. 175-200 in *Social Structure and Culture*, edited by H. Haferkamp. Berlin: de Gruyter.

—. 1990a. "Homo Socio-oeconomicus: The Emergence of a General Model of Man in the Social Sciences." *Journal of Institutional and Theoretical Economics* 146:727-748.

—. 1990b. "Towards the construction of interdisciplinary theoretical models to explain demographic behaviour." Pp. 199-217 in *Emerging Issues in Demographic Research*, edited by C. A. Hazeu & G. A. B. Frinking. Amsterdam: Elsevier.

—. 1991. "Social Approval, Fertilty and Female Labour Market Behaviour." Pp. 32-61 in *Female Labour Market Behaviour and Fertility*, edited by J. J. Siegers, Jenny de Jong-Gierveld & E. Van Imhoff. Berlin, Heidelberg, New York, London, Paris, Tokyo, Hong Kong, Barcelona, Budapest: Springer.

—. 1992. "The Method of Decreasing Abstraction." Pp. 3-20 in *Rational Choice Theory. Advocacy and Critique*, edited by J. S. Coleman & T. J. Fararo. Newbury Park, London, New Dehli: Sage.

—. 2003. "Institutional Design and its Discontent: Coleman's Neglect of Social Rationality." *Center for the Study of Economy & Society CSES Working Paper Series* 14.

Lindenberg, Siegwart and B. S. Frey. 1993. "Alternatives, Frames, and Relative Prices - a Broader View of Rational Choice Theory." *Acta Sociologica* 36:191-205.

Liska, Allen E. 1984. "A Critical Examination of the Causal Structure of the Fishbein/Ajzen Attitude-Behavior Model." *Social Psychology Quarterly* 47:61-74.

Loasby, Brian J. 2001. "Time, knowledge and evolutionary dynamics: why connections matter." *Journal of Evolutionary Economics* 11:393-412.

Loewenstein, George. 1987. "Anticipation and the Valuation of Delayed Consumption." *The Economic Journal* 97:666-684.
—. 1992. "The Fall and Rise of Psychological Explanations in the Economics of Intertemporal Choice." Pp. 3-34 in *Choice over Time*, edited by G. Loewenstein & J. Elster. New York: Sage.
Loewenstein, George and Jon Elster. 1992. *Choice over time*. New York: Sage.
Loewenstein, George F. 1988. "Frames of Mind in Intertemporal Choice." *Management Science* 34:200-214.
Loewenstein, George and Richard H. Thaler. 1989. "Anomalies: Intertemporal Choice." *The Journal of Economic Perspectives* 3:181-193.
Luckmann, Thomas. 1975. "On the Rationality of Institutions in Modern Life." *European Journal of Sociology* 16:3-15.
Lukes, Steven. 1991. "The Rationality of Norms." *Archives Européennes de Sociologie* 32:142-149
Lundberg, Shelly and Robert A. Pollak. 1994. "Noncooperative Bargaining Models of Marriage." *The American Economic Review* 84:132-137.
—. 1996. "Bargaining and Distribution in Marriage." *The Journal of Economic Perspectives* 10:139-158.
—. 2007. "The American Family and Family Economics." *The Journal of Economic Perspectives* 21:3-26.
Mackenroth, Gerhard. 1953. *Bevölkerungslehre: Theorie, Soziologie und Statistik der Bevölkerung*. Berlin, Heidelberg, Göttingen: Springer.
Macunovich, Diane J. 1995. "The Butz-Ward Fertility Model in the Light of More Recent Data." *The Journal of Human Resources* 30:229-255.
Mahon, Rianne. 2002. "Child care: Toward what kind of “social Europe”?" *Social Politics* 9:343-379.
Mahy, Benoit, Robert Plasman, and Francois (Eds.) Rycx. 2006. *Gender Pay Differentials - Cross National Evidence from Micro-Data*: Palgrave MacMillan.
Mannheim, Karl. 1978. "Das Problem der Generationen (originally 1928)." Pp. 38-53 in *Soziologie des Lebenslaufs.*, edited by M. Kohli. Darmstadt: Luchterhand.
Manow, Philip. 2002. "The good the bad and the ugly. Esping-Andersens Sozialstaats-Typologie und die konfessionellen Wurzeln des westlichen Wohlfahrtsstaats." *Kölner Zeitschrift für Soziologie und Sozialpsychologie.* 54:203-225.
Manser, Marilyn and Murray Brown. 1980. "Marriage and Household Decision-Making: A Bargaining Analysis." *International Economic Review* 21:31-44.
Marbach, Jan H. and Angelika Tölke. 2007. "Frauen, Männer und Familie: Lebensorientierung, Kinderwunsch und Vaterrolle." in *Ein Leben ohne Kinder. Kinderlosigkeit in Deutschland*, edited by D. Konietzka & M. Kreyenfeld. Wiesbaden: VS-Verlag.
March, James G. 1978. "Bounded Rationality, Ambiguity, and the Engineering of Choice." *The Bell Journal of Economics* 9:587-608.
Mathews, T. J. and Brady E. Hamilton. 2002. "Mean Age of Mother, 1970-2000." *National Vital Statistics Reports* 51.
Matthes, Britta and Bogdan Mach. 2006. "Probleme der Vergleichbarkeit von Bildungszertifikaten in international vergleichenden Untersuchungen." in *Soziale Ungleichheit, Kulturelle Unterschiede. Verhandlungen des 32. Kongresses der Deutschen Gesellschaft für Soziologie in München 2004*, vol. CD-Rom Edition, edited by K.-S. Rehberg. Frankfurt / Main: Campus.
Mayer, Karl Ulrich. 1987. "Lebenslaufforschung " Pp. 51-73 in *Methoden der Biographie- und Lebenslaufforschung (Biographie und Gesellschaft No. 1)*, edited by W. Voges. Opladen: Leske & Budrich.
—. 1990. *Lebensverläufe und sozialer Wandel*: Westdeutscher Verlag.
—. 1991. "Soziale Ungleichheit und Differenzierung von Lebensverläufen." Pp. 667-687 in *Die Modernisierung moderner Gesellschaften. Verhandlungen des 25. Deutschen Soziologentages.*, edited by W. Zapf. Frankfurt a.M/. New York: Campus.

—. 1996. "Lebensverläufe und gesellschaftlicher Wandel." Pp. 43-72 in *Kritische Übergänge: Statuspassagen und sozialpolitische Institutionalisierungen.*, edited by J. Behrens & W. Voges. Frankfurt a.M/. New York: Campus.

—. 2001. "The paradox of global social change and national path dependencies. Life course patterns in advanced societies." Pp. 89-110 in *Inclusions and Exclusions in European Societies*, edited by A. Woodward & M. Kohli. London, New York: Routledge.

—. 2004. "Whose Lives? How History, Societies, and Institutions Define and Shape Life Courses." *Research in Human Development* 1:161-187.

—. 2005. "Life Courses and Life Chances in a Comparative Perspective." Pp. 17-55 in *Analyzing Inequality: Life Chances and Social Mobility in Comparative Perspective*, edited by S. Svallfors. Stanford, CA: Stanford University Press.

Mayer, Karl Ulrich and Hans-Peter Blossfeld. 1990. "Die gesellschaftliche Konstruktion sozialer Ungleichheit im Lebensverlauf." Pp. 297-318 in *Lebenslagen. Lebensläufe. Lebensstile. Soziale Welt - Sonderband 7*, edited by P. A. Berger & S. Hradil.

Mayer, Karl Ulrich and Martin Diewald. 2007. "Die Institutionalisierung von Lebensverläufen." in *Entwicklungspsychologie der Lebensspanne. Ein Lehrbuch*, edited by J. Brandtstädter & U. Lindenberger. Stuttgart: Kohlhammer.

Mayer, Karl Ulrich and Walter Müller. 1986. "The State and the Structure of the Life Course." Pp. 217-245 in *Human Development and the Life Course: Multidisciplinary Perspectives.*, edited by A. B. Sørensen, F. E. Weinert & L. R. Sherrod. Hillsdale, NJ: Erlbaum.

—. 1989. "Lebensverläufe im Wohlfahrtsstaat." Pp. 41-60 in *Handlungsspielräume. Untersuchungen zur Individualisierung und Institutionalsierung von Lebensläufen in der Moderne, Der Mensch als soziales und personales Wesen*, edited by A. Weymann. Stuttgart: Enke.

Mayer, Karl Ulrich and Urs Schoepflin. 1989. "The State and the Life Course." *Annual Review of Sociology* 15:187-209.

Mayer, Karl Ulrich, Gert G. Wagner, and David L. Featherman. 1989. "Methodological Problems in Cross-National Research on Retirement." in *Age structuring in comparative perspective*, edited by D. I. Kertzer & K. W. Schaie. Hillsdale, NJ: Lawrence Erlbaum.

McDonald, Peter. 2000. "Gender Equity in Theories of Fertility Transition." *Population and Development Review* 26:427-439.

—. 2001. "Theory pertaining to low fertility." in *International Union for the Scientific Study of Population (IUSSP). Working Group on Low Fertility*. Tokyo, Japan.

—. 2002. "Sustaining Fertility through Public Policy: The Range of Options." *Population (English Edition, 2002-)* 57:417-446.

McElroy, Marjorie B. and Mary Jean Horney. 1981. "Nash-Bargained Household Decisions: Toward a Generalization of the Theory of Demand." *International Economic Review* 22:333-349.

Mertins, Günter. 1997. "Demographischer Wandel in der Europäischen Union und Perspektiven." in *Demographischer Wandel in der europäischen Dimension und Perspektive*, edited by K. Eckart & S. Grundmann. Berlin: Duncker & Humboldt.

Meyer, Thomas, B. 2002. "Moderne Elternschaft - neue Erwartungen, neue Ansprüche." *Aus Politik und Zeitgeschichte* 22, 23:40-46.

Meyer, Traute and Birgit Pfau-Effinger. 2006. "The Gender Dimension of the Restructuring of Pension Systems – a Comparison of Britain and Germany." *International Journal of Ageing and Later Life* 4:67-110.

Mills, Melinda and Hans-Peter Blossfeld. 2003. "Globalization, Uncertainty and Changes in Early Life Courses." *Zeitschrift für Erziehungswissenschaft* 6:188-218.

Mincer, Jacob. 1963. "Market Prices, Opportunity Cost and Income Effects." in *Measurement in Economics*, edited by C. Christ: Stanford University.

Mincer, Jacob and Haim Ofek. 1982. "Interrupted Work Careers: Depreciation and Restoration of Human Capital." *The Journal of Human Resources* 17:3-24.

Mincer, Jacob and Solomon Polachek. 1974. "Family Investments in Human Capital: Earnings of Women." *The Journal of Political Economy* 82:S76-S108.

MISSOC. 2002. *Social protection in the Member States of the European Union. Situation on 1 January 2002 and evolution*. Luxembourg: European Communities.
—. 2004. *Social protection in the Member States of the European Union. Situation on 1 January 2003 and evolution*. Luxembourg: European Communities.
—. 2006. *Social protection in the Member States of the European Union. Situation on 1 January 2005*. Luxembourg: European Communities.
Moen, Phyllis. 2003. "Linked Lives: Dual Careers, Gender and the Contingent Life Course." Pp. 237-258 in *Social Dynamics of the Life Course. Transitions, Institutions, and Interrelations*, edited by W. R. Heinz & V. W. Marshall. New York: Gruyter.
Morgan, Philip S. 2003. "Is Low Fertility a Twenty-First-Century Demographic Crisis?" *Demography* 40:589-603.
Morgan, Philip S. and Ronald R. Rindfuss. 1999. "Reexamining the link of early childbearing to marriage and to subsequent fertility." *Demography* 36:59-75.
Morgan, Philip S. and Yang Yang. 2002. "How Big Are Educational Racial Fertility Differentials in the U.S.?" *Prepared Paper: Annual Meetings of the Population Association of American, May 8-10, 2002, Atlanta, Georgia.*
Morgan, S. Philip. 1985. "Individual and Couple Intentions for More Children: A Research Note." *Demography* 22:125-132.
Murphy, Mike. 1989. "Unemployment among Young People: Social and Psychological Causes and Consequences." *Youth and Policy* 29:11-19.
Nash, John. 1953. "Two-Person Cooperative Games." *Econometrica* 21:128-140.
Nash, John F., Jr. 1950. "The Bargaining Problem." *Econometrica* 18:155-162.
National Center for Education Statistics. 2004. *Comparative Indicators of Education in the United States and Other G8 Countries: 2004*, Edited by U. S. D. o. Education. Washington, D.C.: U.S. Government Printing Office.
—. 2007. *Comparative Indicators of Education in the United States and Other G8 Countries: 2006*, Edited by U. S. D. o. Education. Washington, D.C.: U.S. Government Printing Office.
Nauck, Bernhard. 2001. "Der Wert von Kindern für ihre Eltern." *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 53:407-435.
—. 2005. "Changing Value of Children: An Action Theory of Fertility Behavior and Intergenerational Relationships in Cross-Cultural Comparison." Pp. 183-202 in *Culture and Human Development. The Importance of Cross-Cultural Research to the Social Sciences*, edited by W. Friedelmeier, P. Chakkarath & B. Schwarz. Hove
New York: Psychology Press.
—. 2006. "The changing value of children for their parents. Insights from cross-cultural comparative research in 10 societies." in *International Sociological Association, XVI World Congress of Sociology (RC06)*. Durban, South Africa.
Netemeyer, Richard G., Scot Burton, and Mark Johnston. 1991. "A Comparison of Two Models for the Prediction of Volitional and Goal-Directed Behaviors: A Confirmatory Analysis Approach." *Social Psychology Quarterly* 54:87-100.
Neyer, Gerda. 2003. "Family Policies and Low Fertility in Western Europe." *Journal of Population and Social Security (Population)* Supplement to Vol. 1:49-93.
Noonan, Mary C. 2001. "The Impact of Domestic Work on Men's and Women's Wages." *Journal of Marriage and the Family* 63:1134-1145.
Notestein, Frank W. 1945. "Population - The Long View." in *Food for the World*, edited by T. W. Schultz. Chicago: University of Chicago Press.
O'Donoghue, Ted and Matthew Rabin. 1999. "Doing It Now or Later." *The American Economic Review* 89:103-124.
O'Rand, Angela M. 1996a. "Linking Social Structures to personal Developement." Pp. 67-81 in *Society and Biography*, edited by A. Weymann & W. R. Heinz. Weinheim: Deutscher Studienverlag.

—. 1996b. "Structuration and Individualization: The Life-Course as a Continuous Multilevel Process." Pp. 3-16 in *Generating Social Stratification: Toward a New Research Agenda*, edited by A. C. Kerckhoff. Boulder, CO: Westview.

OECD. 1995. "OECD Employment Outlook. Part Two. Key Issues for Labour Market and Social Policies." Pp. 101-138. Paris: Organisation for Economic Co-operation and Development OECD.

—. 1996. *OECD Employment Outlook*. Paris: Organisation for Economic Co-operation and Development OECD.

—. 2001a. "Balancing Work and Family Life: Helping Parents Into Paid Employment." in *OECD Employment Outlook 2001*. Paris: Organisation for Economic Co-operation and Development OECD.

—. 2001b. *Bildung auf einen Blick. OECD-Indikatoren*. Paris: Organisation for Economic Co-operation and Development OECD.

—. 2005. *OECD Factbook*: Organisation for Economic Co-operation and Development OECD.

—. 2006. *Education at a Glance. OECD Indicators 2006*: OECD Publishing.

—. 2007a. *OECD Employment Outlook*: Organisation for Economic Co-operation and Development OECD.

—. 2007b. "SourceOECD. Employment and Labour Market Statistics. Labour force statistics - Summary tables Vol 2006 release 03. Online Reference: http://oberon.sourceoecd.org/vl=6959625/cl=27/nw=1/rpsv/statistic/s5_about.htm?jnlissn=16081161 Access date: 01/10/2007." Organisation for Economic Co-operation and Development OECD.

Oláh, Livia Sz. 2001. *Gendering Family Dynamics: The Case of Sweden and Hungary. Dissertation.* Stockholm: Stockholm University Demographic Unit.

Ollikainen, Virve. 2006. "Gender Differences in Transitions from Unemployment: Micro Evidence from Finland." *Review of Labour Economics and Industrial Relations* 20:159-198.

Ondrich, Jan., C. Katharina. Spiess, Q. Yang, and Gert. G. Wagner. 1999. "Full time or part time? German parental leave policy and the return to work after childbirth in Germany." *Research Labor Economics* 18:41-74.

Opielka, Michael. 2002. "Familie und Beruf. Eine deutsche Geschichte." *Aus Politik und Zeitgeschichte*.

Oppenheimer, Valerie Kincade. 1973. "Demographic Influence on Female Employment and the Status of Women." *The American Journal of Sociology* 78:946-961.

—. 1988. "A Theory of Marriage Timing." *The American Journal of Sociology* 94:563-591.

—. 1994. "Women's Rising Employment and the Future of the Family in Industrial Societies." *Population and Development Review* 20:293-342.

Oppenheimer, Valerie. Kinkaid. and A. Lewin. 1999. "Career Development and Marriage Formation in a Period of Rising Inequality: Who is at Risk? What are their Prospects?" Pp. 189-225 in *Transitions to Adulthood in a Changing Economy*, edited by B. A. e. al. Westport & London: Praeger.

Orloff, Ann Shola. 1993. "Gender and the Social Rights of Citizenship: The Comparative Analysis of Gender Relations and Welfare States." *American Sociological Review* 58:303-328.

Ortendahl, Monica and James F. Fries. 2002. "Time-related issues with application to health gains and losses." *Journal of Clinical Epidemiology* 55:843-848.

Ostner, Ilona. 1995. "Arm ohne Ehemann? Sozialpolitische Regulierung von Lebenschancen für Frauen im internationalen Vergleich." *Aus Politik und Zeitgeschichte*:32-46.

—. 1998. "Quadraturen im Wohlfahrtsdreieck." Pp. 225-252 in *Welten des Wohlfahrtskapitalismus*, edited by S. Lessenich & I. Ostner. New York: Campus.

Ott, Notburga. 1989. "Familienbildung und familiale Entscheidungsfindung aus verhandlungstheoretischer Sicht." Pp. 97-116 in *Familienbildung und Erwerbstätigkeit im demographischen Wandel. Proceedings der 23. Arbeitstagung der Deutschen Gesellschaft für Bevölkerungswissenschaft.*, edited by G. G. Wagner, N. Ott & Hoffmann-Nowotny. Berlin: Springer.

—. 1995. "Fertility and Division of Work in the Family. A Game Theoretic Model of Household Decisions." Pp. 80-99 in *Out of the Margin. Feminist Perspectives on Economics*, edited by E. Kuiper & J. Sap. London: Routledge.
—. 1998. "Der Familienökonomische Ansatz von Gary S. Becker." Pp. 63-90 in *Gary Beckers ökonomischer Imperialismus.*, edited by I. Pies & M. Leschke. Tübingen: Morh & Siebeck.
—. 2001. *Unsicherheit, Unschärfe und rationales Entscheiden. Die Anwendung von Fuzzy-Methoden in der Entscheidungstheorie*. Heidelberg: Physica.
Palme, Joakim. 1990. *Pension Rights in Welfare Capitalism*. Stockholm: Swedish Institute for Social Research.
Pampel, Fred C. and H. Elizabeth Peters. 1995. "The Easterlin Effect." *Annual Review of Sociology* 21:163-194.
Parsons, Talcott. 1965. *Theories of Society*. New York: Free Press.
Pellizzari, Michele. 2004. "Unemployment Duration and the Interactions Between Unemployment Insurance and Social Assistance." in *IGIER (Innocenzo Gasparini Institute for Economic Research) Working Paper Series*, vol. 272: Bocconi University.
Petersen, Thieß and Britta Lübcke. 2006. "Parenthood as a problem of economic decision-making: Model theoretical foundations and family policy consequences." *Zeitschrift für Bevölkerungswissenschaft* 31:187-230.
Pfau-Effinger, Birgit. 2000. *Kultur und Frauenerwerbstätigkeit in Europa. Theorie und Empirie des internationalen Vergleichs*. Opladen: Leske & Budrich.
—. 2001. "Changing Welfare States and Labour Markets in the Context of European Gender Arrangements." *COST A13. Working Group on Changing Labour Markets, Welfare Policies and Citizenship. Working Paper.*
Pfau-Effinger, Birgitt. 1996. "Analyse internationaler Differenzen in der Erwerbsbeteiligung von Frauen. Theoretischer Rahmen und empirische Ergebnisse." *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 48:462-492.
Pollak, Robert A. 1970. "Habit Formation and Dynamic Demand Functions." *The Journal of Political Economy* 78:745-763.
Pollak, Robert A. and Susan Cotts Watkins. 1993. "Cultural and Economic Approaches to Fertility: Proper Marriage or Mesalliance?" *Population and Development Review* 19:467-496.
Popper, Karl R. 1995. "Erkenntnis und Gestaltung der Wirklichkeit: Die Suche nach einer besseren Welt." Pp. 11-40 in *Auf der Suche nach einer besseren Welt. Vorträge und Aufsätze aus dreißig Jahren*, edited by K. R. Popper. München: Piper.
Potts, Malcolm. 1997. "Sex and the Birth Rate: Human Biology, Demographic Change, and Access to Fertility-Regulation Methods." *Population and Development Review* 23:1-39.
Prelec, Drazen and George Loewenstein. 1991. "Decision Making over Time and under Uncertainty: A Common Approach." *Management Science* 37:770-786.
Presser, Harriet B. 1994. "Employment schedules among dual-earner spouses and the division of household labor by gender." *American Sociological Review.* 59:348-364.
—. 2001. "Comment: A Gender Perspective for Understanding Low Fertility in Post-Transitional Societies." *Population and Development Review* 27:177-183.
Prince Cooke, Lynn. 2006. ""Doing" Gender in Context: Households Bargaining and Risk of Divorce in Germany and the United States." *American Journal of Sociology* 112:442-472.
Rabin, Matthew and Richard H. Thaler. 2001. "Anomalies: Risk Aversion." *The Journal of Economic Perspectives* 15:219-232.
Rabinowicz, Wlodek. 1995. "To Have One's Cake and Eat It, Too: Sequential Choice and Expected-Utility Violations." *The Journal of Philosophy* 92:586-620.
Rachlin, Howard and Andres Rainieri. 1992. "Irrationality, Impulsiveness, and Selfishness as Discount Reversal Effects." Pp. 93-118 in *Choice over Time*, edited by G. Loewenstein & J. Elster. New York: Sage.
Rasul, Imran. 2005. "Household Bargaingin over Fertility: Theory and Evidence from Malaysia."

Reinecke, Jost. 1994. "Das individualistische Forschungsprogramm in den Sozialwissenschaften (Rational Choice)." Pp. 247-270 in *Soziologie - Zugänge zur Gesellschaft, Band 1*, edited by G. Kneer, K. Kraemer & A. Nassehi. Münster: LIT - Verlag.

Rendall, Michael S., Lynda Clarke, H. Elizabeth Peters, Nalini Ranjit, and Georgia Verropoulou. 1999. "Incomplete Reporting of Men's Fertility in the United States and Britain: A Research Note." *Demography* 36:135-144.

Riley, Matilda W. 1986. "Men, Women, and the Lengthening of the Life Course." Pp. 333-347 in *Gender and the Life Course*, edited by A. Rossi. New York: Aldine.

Riley, Matilda W., Robert L. Kahn, and Anne Foner. 1994. *Age and Structural Lag. Society's Failure to Provide Meaningful Opportunities in Wor, Family, and Leisure*. New York: Wiley & Sons.

Rindfuss, Ronald R. and Karin L. Brewster. 1996. "Childrearing and Fertility." Pp. 258-289 in *Fertility in the United States. New patterns, new theories. Supplement to Population and Development Review 22*, edited by J. B. Casterline, R. D. Lee & K. A. Foote. New York: Population Council.

Rindfuss, Ronald R., Karen Benjamin Guzzo, and Philip S. Morgan. 2003. "The Changing Institutional Context of Low Fertility." *Population Research and Policy Review*:411-438.

Rindfuss, Ronald R., Philip S. Morgan, and Gray Swicegood. 1988. *First Births in America*. Berkeley, Los Angeles, London: University of California Press.

Robinson, John P. 1977. "The "New Home Economics": Sexist, Unrealistic, or Simply Irrelevant?" *The Journal of Consumer Research* 4:178-181.

Robinson, Warren C. 1997. "The Economic Theory of Fertility Over Three Decades." *Population Studies* 51:63-74.

Roelofsma, Peter and Daniel Rea. 2000. "Intransitive Intertemporal Choice." *Journal of Behavioral Decision Making* 13:161-177.

Rubery, Jill, Mark Smith, Colette Fagan, and Damian Grimshaw. 1998. *Women and European Employment*. London, New York: Routledge.

Ruckdeschel, Kerstin. 2007. "Nachdenken über den Kinderwunsch." *BIB-Mitteilungen* 1:13-16.

Ryder, Norman B. 1983. "Cohort and period measures of changing fertility." Pp. 737-756 in *Determinants of Fertility in Developing Countries, Vol. 2*, edited by R. A. Bulatao & R. D. Lee. New York: Academic Press.

Sackmann, Reinhold. 2000. "Geburtenentscheidungen und Lebenslaufpolitik im ostdeutschen Transformationsprozess." Pp. 146-163 in *Übergänge – Individualisierung, Flexibilisierung und Institutionalisierung des Lebensverlaufs. 3. Beiheft der Zeitschrift für Soziologie der Erziehung und Sozialisation*, edited by W. R. Heinz.

Sainsbury, Diane. 1996. *Gender, Equality and Welfare States*. Cambridge: Cambridge University Press.

—. 1999a. "Gender and Social-Democratic Welfare States." Pp. 75-116 in *Gender and Welfare State Regimes*. Oxford: Oxford University Press.

—. 1999b. "Gender, Policy Regimes, and Politics." Pp. 245-276 in *Gender and Welfare State Regimes*. Oxford: Oxford University Press.

Sardon, Jean-Paul and Glenn D. Robertson. 2004. "Recent Demographic Trends in the Developed Countries." *Population (English Edition, 2002-)* 59:263-314.

Savage, Leonard J. 1954. *The Foundations of Statistics*. New York: John Wiley and Sons.

Schaeper, Hilde and Thomas Kühn. 2000. "Zur Rationalität familialer Entscheidungsprozesse am Beispiel des Zusammenhangs zwischen Berufsbiographie und Familiengründung." *Zeitschrift für Soziologie der Erziehung und Sozialisation*:124-145.

Schirrmacher, Frank. 2004. *Das Methusalem Komplott*: Blessing.

Schmitt, Christian. 2005. "Kinderlosigkeit bei Männern - Geschlechtsspezifische Determinanten ausbleibender Elternschaft." Pp. 98-126 in *Männer - Das ‚vernachlässigte" Geschlecht in der Familienforschung, Zeitschrift für Familienforschung. Sonderheft 4*, edited by A. Tölke & K. Hank. Wiesbaden: VS-Verlag für Sozialswissenschaften.

—. 2008. "Increasing Childlessness in Germany." Pp. 23-28 in *A Quarter Century of Social and Economic Change: Results from the German Panel Survey (SOEP)*, edited by B. Headey & E. Holst. Berlin: DIW Berlin.

Schmitt, Christian and Gert G. Wagner. 2006. "Kinderlosigkeit von Akademikerinnen überbewertet." *DIW Wochenbericht* 73:313-317.

Schmitt, Christian and Ulrike Winkelmann. 2005. "Wer bleibt kinderlos? Was sozialstrukturelle Daten über Kinderlosigkeit bei Frauen und Männern verraten." *Feministische Studien* 23:9-23.

Schneider, Norbert F. 1996. "Bewußt kinderlose Ehen." *Zeitschrift für Frauenforschung* 14:128-137.

Schoen, Robert, Young J. Kim, Constance A. Nathanson, Jason Fields, and Nan Marie Astone. 1997. "Why Do Americans Want Children?" *Population and Development Review* 23:333-358.

Schütze, Yvonne. 2002. "Zur Veränderung im Eltern-Kind-Verhältnis seit der Nachkriegszeit." Pp. 71-97 in *Kontinuität und Wandel der Familie in Deutschland*, edited by R. Nave-Herz. Stuttgart: Lucius & Lucius.

Schwarz, Karl. 2002. "Kinderzahl der Frauen in den alten und neuen Bundesländern im Jahr 2000." *BIB-Mitteilungen* 1.

—. 2007. "Zur Problematik von Maßnahmen zur Vereinbarkeit von Familientätigkeit und Erwerbstätigkeit als Mittel zur Förderung des Kinderwunsches." *Zeitschrift für Bevölkerungswissenschaft* 32:35-50.

Scott, John. 2000. "Rational Choice Theory." in *Understanding Contemporary Society: Theories of the Present*, edited by G. Browning, A. Halcli & F. Webster. London, Thousand Oaks, New Dethi: Sage.

Seebens, Holger. 2005. "Bargaining over Fertility in Rural Ethiopia." *Working Paper*.

Sen, Amartya. 1989. "Cooperation, Inequality, and the Family." *Population and Development Review* 15:61-76.

—. 1990. "Gender and cooperative conflicts." Pp. 195-223 in *Persistent inequalities - Women and development.*, edited by I. Tinker. Oxford.

—. 1994. "The Formulation of Rational Choice." *The American Economic Review* 84:385-390.

—. 1997. "Maximization and the Act of Choice." *Econometrica* 65:745-779.

Settersten, Richard A., Jr. and Karl Ulrich Mayer. 1997. "The Measurement of Age, Age Structuring, and the Life Course." *Annual Review of Sociology* 23:233-261.

Shanahan, Michael J., Scott M. Hofer, and Lilly Shanahan. 2004. "Biological Models of Behaviour and the Life Course." Pp. 597-622 in *Handbook of the Life Course*, edited by J. T. Mortimer & M. J. Shanahan. New York: Springer.

Shelton, Beth Anne and Daphne John. 1996. "The division of household labor." *Annual Review of Sociology*. 22:299-322.

Simon, Herbert A. 1955. "A Behavioral Model of Rational Choice." *The Quarterly Journal of Economics* 69:99-118.

—. 1959. "Theories of Decision-Making in Economics and Behavioral Science." *The American Economic Review* 49:253-283.

—. 1976. "From substantive to procedural rationality." Pp. 129-148 in *Method and appraisial in economics*, edited by L. J.P.: Cambridge University Press.

—. 1978. "On How to Decide What to Do." *The Bell Journal of Economics* 9:494-507.

—. 1985. "Human Nature in Politics: The Dialogue of Psychology with Political Science." *The American Political Science Review* 79:293-304.

Skirbekk, Vegard, Hans-Peter Kohler, and Alexia Prskawetz. 2004. "Birth month, school graduation, and the timing of births and marriages." *Demography* 41:547-568.

Smith, Adam. 1759. *The Theory of Moral Sentiments*. Edinburgh.

Sobel, Joel. 2005. "Interdependent Preferences and Reciprocity." Pp. 392-436, vol. 43: American Economic Association.

Sobel, Michael, E. and Gerhard Arminger. 1992. "Modeling Household Fertility Decisions: A Nonlinear Simultaneous Probit Model." *Journal of the American Statistical Association* 87:38-47.

Sobotka, Tomáš. 2004. "Postponement of Childbearing and Low Fertility in Europe." Rijksuniversiteit Gronningen, Gronningen.

Sorensen , Jesper B. 1999. "STPIECE: Stata module to estimate piecewise-constant hazard rate models." Chicago: University of Chicago.

Soskice, David. 2005. "Varieties of Capitalism and Cross-National Gender Differences." *Social Politics* 12:170-179.

Spieß, C. Katharina. 2006. "Die Bündelung und Integration familienbezogener Leistungen bei einer Familienkasse." in *Ehe und Familie in der Steuerrechts- und Sozialordnung*, edited by J. Althammer & U. Klammer: Mohr Siebeck.

Statistics UK. 2007. "Total Fertility Rate UK. Online Reference: http://www.statistics.gov.uk/cci/nugget.asp?id=951 Access Date: 01/10/2007. Date Published: 22/08/2007.", vol. 2007.

Stier, Haya, Noah Lewin-Epstein, and Michael Braun. 2001. "Welfare Regimes, Family-Supportive Policies, and Women's Employment along the Life-Course." *The American Journal of Sociology* 106:1731-1760.

Stigler, George J. and Gary S. Becker. 1977. "De Gustibus Non Est Disputandum." *The American Economic Review* 67:76-90.

Strotz, Robert. H. 1956. "Myopia and Inconsistency in Dynamic Utility Maximization." *The Review of Economic Studies* 23:165-180.

Swidler, Ann. 1986a. "Culture in Action." *American Sociological Revue.* 51:273-286.

—. 1986b. "Culture in Action: Symbols and Strategies." *American Sociological Review* 51:273-286.

Testa, Rita Maria. 2006. *Childbearing Preferences and Family Issues in Europe*. Eurobarometer Special Issue 253: TNS Opinion & Social.

Thaler, Richard H. 2000. "From Homo Economicus to Homo Sapiens." *The Journal of Economic Perspectives* 14:133-141.

Thomson, Elizabeth. 1983. "Individual and Couple Utility of Children." *Demography* 20:507-518.

—. 1997. "Couple Childbearing Desires, Intentions, and Births." *Demography* 34:343-354.

Thomson, Elizabeth and Jan M. Hoem. 1998. "Couple Childbearing Plans and Births in Sweden." *Demography* 35:315-322.

Thomson, Elizabeth, Elaine McDonald, and Larry L. Bumpass. 1990. "Fertility Desires and Fertility: Hers, His, and Theirs." *Demography* 27:579-588.

Tölke, Angelika. 1989. *Lebensverläufe von Frauen. Familiäre Ereignisse, Ausbildungs- und Erwerbsverhalten im Kontext des Individuellen Lebensverlaufs und der Gesellschaftlichen Entwicklung*. Weinheim.

—. 2004. "Die Bedeutung von Herkunftsfamilie, Berufsbiographie und Partnerschaften für den Übergang zur Ehe und Vaterschaft." *MPIDR Working Paper Series* 17.

—. 2005. "Die Bedeutung von Herkunftsfamilie, Berufsbiografie und Partnerschaften für den Übergang zur Ehe und Vaterschaft." Pp. 98-126 in *Männer - Das ‚vernachlässigte" Geschlecht in der Familienforschung, Zeitschrift für Familienforschung. Sonderheft 4.*, edited by A. Tölke & K. Hank. Wiesbaden: VS-Verlag für Sozialswissenschaften.

Tölke, Angelika and Martin Diewald. 2003. "Insecurities in Employment and Occupational Careers and their Impact on the Transition to Fatherhood in Western Germany." *Demographic Research* 9:41-67.

Toulemon, Laurent. 2001. "Men's Fertility and Family Size as Compared to Women's." in *IUSSP General Population Conference*. Salvador de Bahia, Brasil.

Trappe, Heike. 1995. *Emanzipation oder Zwang? Frauen in der DDR zwischen Beruf, Familie und Sozialpolitik*. Berlin: Akademie-Verlag.

Trzcinski, Eileen. and Elke Holst. 2003. "Hohe Lebenszufriedenheit teilzeitbeschäftigter Mütter." *DIW Wochenbericht* 70:539-545.

Turchi, Boone A. 1975. *The Demand for Children: The Economics of Fertility in the United States*. Cambridge, MA: Ballinger.

Tversky, Amos and Daniel Kahneman. 1986. "Rational Choice and the Framing of Decisions." *The Journal of Business* 59:S251-S278.
—. 1991. "Loss Aversion in Riskless Choice: A Reference-Dependent Model." *The Quarterly Journal of Economics* 106:1039-1061.
Tversky, Amos, Paul Slovic, and Daniel Kahneman. 1990. "The Causes of Preference Reversal." *The American Economic Review* 80:204-217.
Tversky, Amos and Richard H. Thaler. 1990. "Anomalies: Preference Reversals." *The Journal of Economic Perspectives* 4:201-211.
United Nations. 2007a. "UNSTATS Online Database. Total Fertility Rate (national data). Online-Reference: http://unstats.un.org/unsd/cdb/cdb_advanced_data_extract.asp?srID=14920 Access Date: 01/10/2007." vol. 2007: United Nations.
—. 2007b. *World Population Prospects. The 2006 Revision*: United Nations Department of Economic and Social Affairs. Population Division.
United Nations Population Division. 1998. "United Nations World Population Projections to 2150." *Population and Development Review* 24:183-189.
—. 2006. *World Population Prospects. The 2006 Revision*. New York: United Nations Department of Economic and Social Affairs.
van de Kaa, Dirk J. 1987. "Europe's Second Demographic Transition." *Population Bulletin* 42:1-53.
—. 2001. "Postmodern Fertility Preferences: From Changing Value Orientation to New Behavior." *Population and Development Review* 27:290-331.
—. 2002. "The Idea of a Second Demographic Transition in Industrialized Countries." in *Sixth Welfare Policy Seminar*. Tokyo: National Institute of Population and Social Security.
—. 2004a. "Is the Second Demographic Transition a Useful Research Concept: Questions and Answers." Pp. 4-10 in *Vienna Yearbook of Population Research 2004*, edited by G. Feichtinger. Wien: Österreichische Akademie der Wissenschaften, Institut für Demographie.
—. 2004b. "The True Commonality: In Reflexive Modern Societies Fertility is a Derivative." *Population Studies* 58:77-92.
Veil, Mechtild. 2005. "Geschlechterbeziehungen im deutsch-französischen Vergleich - ein Blick auf Familien und Arbeitsmarktpolitik." in *Arbeitsmarkt, Wohlfahrtsstaat, Familienpolitik und die Geschlechterfrage - deutsch-französische Konvergenzen und Divergenzen*, edited by G. Achcar, D. Simon & M. Veil. Berlin: Social Science Research Center Berlin (WZB).
Vikat, Andres. 2002. "Fertility in Finland in the 1980s and 1990s: Analysis of Fertility Trend by Age and Parity." *Yearbook of Population Research in Finland* 38:159-178.
—. 2004. "Women's labor force attachment and childbearing in Finland." *MPIDR Working Paper Series*.
Voas, David. 2003. "Conflicting Preferences: A Reason Fertility Tends to Be Too High or Too Low." *Population and Development Review* 29:627-646.
von Neumann, John and Oskar Morgenstern. 1944. *Theory of Games and Economic Behavior*: Princeton University Press.
Weber, Max. 1972. *Wirtschaft und Gesellschaft (First Edition 1921)*. Tübingen: Mohr & Siebeck.
—. 1982. "Über einige Kategorien der verstehenden Soziologie." in *Gesammelte Aufsätze zur Wissenschaftslehre. 5th Edition. Original 1904*, edited by J. Winckelmann. Tübingen: Mohr & Siebeck.
Wells, William. 2001. "From Restart to the New Deal in the United Kingdom." Pp. 241-262 in *Labour Market Policies and the Public Employment Service. Part II. Unemployment Benefits and Activation Measures*, edited by OECD. Paris: Organisation for Economic Co-operation and Development OECD.
Westoff, Charles F. 1987. "Perspective on Nuptiality and Fetility." Pp. 155-170 in *Below Replacement Fertiity in Industrial Societies. Causes Conseuqences Policies*, edited by K. Davis, M. S. Bernstam & Ricrado-Campbell. Cambridge: Cambridge University Press.
Willis, Robert J. 1973. "A New Approach to the Economic Theory of Fertility Behavior." *The Journal of Political Economy* 81:S14-S64.

Witte, James C. and Gert G. Wagner. 1995. "Declining Fertility in East Germany After Unification: A Demographic Response to Socioeconomic Change." Pp. 387-397, vol. 21: Population Council.

Wrohlich, Katharina and Fabien Dell. 2005. "Steuerliche Familienförderung in Frankreich und Deutschland." *DIW Wochenbericht* 72:479- 486.

Yamaguchi, Kazuo and Linda R. Ferguson. 1995. "The Stopping and Spacing of Childbirths and Their Birth-History Predictors: Rational-Choice Theory and Event-History Analysis." *American Sociological Review* 60:272-298.

Zabin, Laurie Schwab, George R. Huggins, Mark R. Emerson, and Vanessa E. Cullins. 2000. "Partner Effects on a Woman's Intention to Conceive: 'Not with This Partner'." *Family Planning Perspectives* 32:39-45.

Zimmermann, Klaus F. and John DeNew. 1990. "Arbeitslosigkeit und Fertilität." Pp. 95-109 in *Bevölkerung und Wirtschaft.*, edited by B. Felderer. Berlin.

Zollinger-Giele, Jennifer and Elke Holst. 2004. "New life patterns and the changing gender contract." Pp. 1-27 in *Changing life patterns in western industrial societies*, edited by J. Zollinger-Giele & E. Holst: Elsevier.