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In diesem Heft:

Schwerpunktthema:

Minority ethnic groups' marriage patterns in Europe

- Transnational marriages in Germany
- Trends and patterns of immigrants' partner choice in Britain
- Assortative mating by ethnic background and education in Sweden
- Patterns of immigrant intermarriage in France

■ Kinderkosten und Familiengründung

■ Forschungsnotizen

ifb-Mitteilungen

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Editorial

Liebe Leserinnen,
liebe Leser,

wie bereits in Heft 1/2009 angekündigt, präsentieren wir Ihnen ein weiteres, international vergleichend angelegtes Schwerpunktthema: *Minority ethnic groups' marriage patterns in Europe*. Gastherausgeberin ist Irena Kogan, die hier Beiträge zum Heiratsverhalten von Immigrant(inn)en in Deutschland, Großbritannien, Schweden und Frankreich versammelt hat.

In den nächsten Heften werden *Familie und Mobilität* sowie die *Geschlechterverhältnisse in Europa* im Mittelpunkt stehen. Weitere Schwerpunktthemen sind in Vorbereitung. Selbstverständlich werden daneben auch weiterhin freie aktuelle Forschungsarbeiten publiziert, die nicht mit einem Themenschwerpunkt im Zusammenhang stehen.

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Wir wünschen Ihnen auch weiterhin eine anregende Lektüre unseres interdisziplinären Journals für die Familienforschung – in welcher Form auch immer.

Hans-Peter Blossfeld
Geschäftsführender Herausgeber

Kurt P. Bierschock
Redakteur

Irena Kogan

Introduction to the special issue on *Minority ethnic groups' marriage patterns in Europe*

Motivation, main research questions, and theoretical backbone of the volume

Post-war migration in Europe is marked by various types of population movements. Throughout the 1950-70s, immigrant workers, largely male, were recruited to satisfy the booming economies of major European countries, whereas after the mid 1970s their wives and children joined them, thus increasing the number of host countries' foreign-born population. In the 1980-90s, migration movements changed their character, becoming of a more humanitarian nature. Nevertheless, one of the most important sources of migration to Western Europe has been family reunification. As second- or third-generation immigrants in Europe become old enough to start families of their own, the question of their partner choices becomes even more important. These days, a substantial part of family reunifications is indeed an inflow of marriage partners among immigrants already residing in the country of immigration or their descendants. Despite the significance of the family-driven nature of European migration and the importance of the marriage migration phenomenon, an adequate understanding of immigrants' marriage patterns and their systematic analyses in European countries is still lacking. This collection of papers aims at shedding light on partner choice among various immigrant groups in four European countries: Germany, Great Britain, Sweden, and France, focusing, where possible, on the phenomenon of transnational marriages.

The choice of marriage partners among immigrants and their descendants is considered to be the most telling indicator of their integration in the host country. Ethnic intermarriages indicate long-lasting social interactions beyond the borders of ethnic groups and reflect the social distance and cultural proximity between the charter and the immigrant populations. They are indicative of the openness of the host society to ethnic diversity and of the degree of harmonisation between a country's different population groups. For immigrants and ethnic minorities, they are likely to provide a strong and durable fundament for integration in various spheres of life. Thus, two crucial questions of migration research with regard to social assimilation, both to be pursued in the papers collected in this volume, ask the following: whether the trend towards intermarriage strengthens with every successive generation and through which mechanisms it is either fostered or impeded.

Scarce evidence suggests that, even in the second generation, the level of intermarriage for some groups is quite low and is only marginally increasing compared to the first generation of immigrants (Schroedter/Kalter 2008). Despite some variation by the ethnic groups, coethnic marriage is still the most dominant pattern for many ethnic groups, with the phenomenon of 'imported' or transnational marriages remaining pronounced. Compared to intermarriages, the practice of importing partners from the country of origin could be seen as the type of marital choice that indicates the highest degree of orientation towards the sending society, its culture, and its traditions. It can slow down the assimilation process considerably due to recurrence of language and integration problems for a newly migrated partner. Children born in such families – even though they are born in the host country – often have difficulties within the education system, as their parents lack the necessary cultural knowledge and social resources to successfully navigate it. Hence, in the two country cases, German and British, for which the data permit it, the phenomenon of transnational marriages is explored in further detail.

Theoretically, the papers of the current volume adhere to general ideas of the contact theory (Blau et al. 1984; Blau et al. 1982) and build on Kalmijn's (1998) distinction between three groups of factors relevant for studying intermarriage and homogamy: (1) the preference for certain characteristics of a spouse based on the individual's resources (e.g., differences of education, socio-economic status, length of residence in the host country, cultural and religious similarity), (2) the influence of the social group (third party) of which they are members (e.g., family, religious community), and (3) the potential constraints imposed by the structure of the marriage market (e.g., sex ratio, size of own ethnic group).

With regard to the choice of marriage partners among ethnic minorities, the cultural resources of an individual appear to be particularly important, influencing his or her preference to marry someone who is of similar background. Third parties are able to influence ethnic marriage patterns via group identification and group sanctions. The stronger the feeling of group identification and the more racial and ethnic groups have internalized the norms of endogamy, the bigger is the tendency to ethnic homogamy. Family sanctions are still important among some ethnic groups, above all those in which family bonds and kinship networks are particularly pronounced. Sanctions are also provided by a religious community or organisation, signifying a smaller propensity for inter-religious and interethnic marriages. Kalmijn (1998) stresses that ethnic homogamy is governed not only by individual- and group-level factors, but also by structural arrangements in terms of the demographic composition of the population as a whole, its regional concentration, or its distribution in smaller functional settings, such as neighbourhoods, schools, or workplaces.

With regard to the choice between a coethnic partner from the host country and an imported partner, a number of studies have mentioned the role of traditional values and the wish for 'unspoiled brides' among men (Lievens 1999; Çelikaksoy et al. 2006; Reniers 2001). Gender imbalances within an immigrant population are also seen as partially responsible for male immigrants importing their brides (Straßburger 2000). No less important is additional power in the household for the men marrying immigrating partners (Reniers 2001). For women who select their partners from abroad, the pressures of their families have been named the most crucial factor behind the decision (González-Ferrer 2006). This factor is the brides' parents, who express their loyalties to their kin and traditions by marrying their daughters to grooms from the same country of origin (Reniers

2001; Haug 2002). Apart from the potential influence of the bride's family, women themselves are said to improve their bargaining positions, as they are the ones who secure the entry into the western world and know the country in which the couple settles (Reniers 2001; González-Ferrer 2006; Lievens 1999).

The effects of the two individual-level variables on the chances of marrying exogenously, within one's own ethnic group or importing a partner from the sending country¹ will be examined in detail in the papers of this volume – (1) duration of residence in the host country or difference between the first and consequent generations, and (2) the level of educational attainment. As regarding the first factor, the growth in the intermarriage rates between the first and the second generation is mentioned by various authors (Schroedter 2006), but the findings are inconclusive for each and every ethnic group. It has also been shown for Germany (González-Ferrer 2006) that better educated immigrants, be they men or women, are more likely to marry outside their ethnic group (see also Schroedter 2006; Klein 2001), whereas only better educated men are also less likely to import their partners from their or their parents' countries of origin. Lievens (1999), for example, shows that in Belgium women who have the highest chance of being well assimilated also have the highest probability of being married to an imported partner, whereas among men the opposite is the case. Whilst for men arguments against choosing partners from the local migrant community were because of their being too modern and behaving too freely, for women, local immigrant men appeared too traditional, poorly educated, and often unsuccessful at work. The empirical question to be pursued in the volume is whether similar patterns could be confirmed for other European countries and how various ethnic groups differ in this regard.

Immigrant marriage patterns in Europe and outline of the volume

Until now, there have been two main streams of research on ethnic intermarriage. The first kind are large-scale quantitative studies which, partially due to the data restrictions, tend to deal predominantly with the role of structural factors for immigrant marriage patterns (e.g., González-Ferrer 2006; Kalmijn/Van Tubergen 2006; Schroedter/Kalter 2008). The second kind are small qualitative studies that focus in depth on the role of attitudinal factors, like religious preferences or family practices, falling short of delivering a crucial test for the external validity of their findings (e.g., Atabay 1998; Toprak 2002). The papers of the current volume follow the former stream of research, aiming to lead to a general understanding of the marriage patterns across Europe, and should be regarded as a first step towards a comprehensive theory-driven analysis of immigrants' partnership patterns covering a wide range of possible influencing factors, applying sound methodological tools and cross-national comparative design.

Unlike in the USA (Qian/Lichter 2001, 2007; Meng/Gregory 2005; Rosenfeld 2002; see Kalmijn 1998 for an overview), research on marriage patterns of immigrants and their descendants in Europe remains rather scarce. A single large-scale comparative study by Lucassen and Laarman (2009), which presents a meta-analysis of the research findings

1 The latter analyses will be conducted solely for Germany and Great Britain.

regarding the propensity to intermarry of various groups of immigrants and their descendants in Germany, France, England, Belgium, and the Netherlands stresses the importance of religion, colour, and colonial background in immigrants' marriage decisions. Migrants whose faith has no tradition in Western Europe, e.g., those from Muslim and Hindu communities, tend to intermarry at a much lower rate than those with a Christian background. The authors argue that colour or racial differences seem to be less detrimental for the propensity to intermarry. Ethnic differences in marriage patterns, however, exist and could, according to Lucassen and Laarman (2009), be influenced by the restrictive migration policies, which increase the pressure on the second generation to marry someone from the same country of origin as their parents.

It has been shown that in *Germany* the rate of interethnic marriages of immigrants from the former recruitment countries and their descendants has increased across cohorts according to official micro data from 1976 to 2004 (Schroedter/Kalter 2008). Men are generally more likely to have a German spouse than women, second generations are more likely than first generations, and Spaniards are most likely to intermarry whereas Turks have the lowest rates of interethnic marriages. Conversely, Turkish immigrants are most likely to have an imported spouse from the country of origin, 25% of second generation Turks do so, followed by the former Yugoslav immigrants (Schroedter 2006).² For second generation Greeks, Italians, Portuguese, and Spaniards, the corresponding rates amount only to 3%. Education is positively related to intermarriage: the higher the educational level is, the higher the probability that an immigrant has a German spouse or partner (Schroedter/Kalter 2008, González-Ferrer 2006, Haug 2002). Macro-structural effects like age specific sex ratio and population size of an immigrant group have been shown to partly explain differences between the nationalities in their probability to have a German spouse – at least for male immigrants (Schroedter/Kalter 2008). An analysis of the Integration Survey from 2000 for persons aged 18 to 30 with German, Turkish, or Italian ethnicity has shown that Islamic religion, in combination with high religiosity, seems to be a further important predictor of partner choice (Haug 2002).

The paper by *Frank Kalter and Julia Schroedter* in this volume explores for the first time patterns and determinants of transnational marriages among ethnic minorities in Germany with the large-scale data of the German Microcensus 1976-2004. Their findings point to the diminishing occurrence of transnational marriages over immigrant cohorts and generations for major immigrant groups. Of all ethnic minority groups, Turkish second generation immigrants are significantly more likely to opt for transnational marriages, followed by ex-Yugoslavs. The study discovers, however, that the factors that are proven to be important for the choice of partners within the host society (like education, sex ratio, or group size) are less likely to account for the choice of partners from the parents' country of origin. The authors conclude that taking religion, the degree of religiosity and social networks – variables that are not available in the microcensus – into account is imperative when attempting to explain the transnational marriage choices of ethnic minority groups.

2 The rates of imported marriages are underestimated here because the rate relates only to those marriages in which one spouse immigrated to Germany *after* the marriage. Thereby, transnational marriages in which both marriage and the immigration of the spouse took place in the same year are not included.

For *Great Britain*, findings from the research using the Labour Force Survey data between 1979-1991 (Jones 1982, 1984; Coleman 1985, 1992, 1994; Berrington 1994) consistently show that Black Caribbeans and Black Africans have much higher rates of intermarriage than Indians, Pakistanis, or Bangladeshis, whereas individuals with mixed-ethnic origins boast the highest rate of intermarriage. Findings for the intergenerational assimilation of marriage behaviour indicate higher rates of interethnic unions among younger generations who were born in Great Britain. With regard to gender variation, the rate of intermarriage appears to be higher for men than for women across all ethnic groups except for Chinese. Berrington (1996) further shows that interethnic partnerships are more common in cohabiting unions and among individuals with a privileged socio-economic status. On the basis of the 1988-2004 General Household Survey, Muttarak (2007) confirms weaker ethnic endogamy among cohabiting unions and remarriages compared to first marriages, weakening ethnic endogamy over time, higher rates of intermarriage for ethnic minorities born in Britain, higher rates of intermarriage for individuals with high educational qualifications except for Blacks, and higher rates of intermarriage for ethnic minorities living in an area with a higher ratio of Whites compared to coethnics.

The paper by *Raya Muttarak* included in this volume extends the analyses of the General Household Survey from 1988-2006 to include an additional partnership option among immigrants and their descendants – an option of importing a partner from overseas. She presents evidence for an increased intergenerational assimilation in marriage behaviour among ethnic minority youth, who are more likely to marry a White British citizen and less likely to engage in the transnational partnership. Whereas the individual level predictors, such as age at union, marital status, educational degree, area ethnic composition, sex ratio, and educational homogamy remain significant predictors of one's partner choice, ethnicity continues to play a most decisive role. Black Caribbean, Black Africans, and highly educated Indians have increasingly high rates of interethnic union with a White British partner, whereas Pakistanis and Bangladeshis continue to lag behind in this respect, favouring a choice of coethnic partners imported from abroad. Overall, however, the study confirms an increase in interethnic partnerships between the White British and immigrant population in Britain.

Whereas the authors of the German and British case studies are able to build on existing research on ethnic marriage patterns in their respective countries, and can extend their analyses to include transnational partnerships, studies of interethnic marriage patterns in *Sweden* have been scant until present day, and have been focused primarily on the partnership choices of Swedish-born residents without making the distinction of their ethnic origin. Niedomsyl et al. (2009) used the data from 1990-2004 to show that male marriage immigrants stem from Western Europe and the Middle East, while women stem from Asia and Eastern Europe. Marriage immigrants forming partnerships with Swedes tend to be drawn from the high end of the educational distribution. Dribe and Lundh (2008) report that immigrants who are better educated, with longer duration of residence and who reside outside the major urban areas are more likely to partner with natives. Immigrants married to natives are also found to have higher employment probabilities and higher incomes, but no attempt is made to determine the direction of causality between marriage and economic outcomes. For first and second generation immigrants, Behtoui

(2008) finds that those with origins outside Northwest Europe and North America have smaller probabilities of intermarrying with natives.

Aycan Çelikkaksoy, Lena Nekby and Saman Rashid contribute to the discourse on immigrant partnerships in Sweden by exploring the determinants of the assortative mating by ethnicity and education, with a particular focus on the role of the individual, marriage market, and parental characteristics. Their results indicate that higher levels of country specific human capital are associated with lower ethnic and higher educational endogamy – a finding that the authors attribute to a shift from ascribed toward attained characteristics as a basis for spousal choice. Opportunities, captured by favourable sex ratios or relative group's size, contribute to both types of assortative mating, whereas the parental example in terms of ethnic or educational group crossing contributes to the explanation of their children's mating behaviour. Finally, the authors report significant differences by gender with regard to both types of assortative mating.

According to *Mirna Safi*, who contributed to this volume, quantitative research on intermarriage in *France* is very scarce, largely owing to the obvious data limitations. Some patterns are nevertheless obvious and universal for France, and similar to other Western European countries. Migrants of African origin and with a Christian religion tend to intermarry far more than migrants with a lighter skin colour but with a non-Western religion (e.g., Islam) (Lucassen/Laarman 2009). Another outstanding feature of the assortative mating among Muslim migrants is that it is almost always conducted within their own ethnic group (e.g., Moroccans marry Moroccans), which, according to Todd (1985), is attributed to the community-based family system. The latter factor seems also to be responsible for lower intermarriage rates among the Portuguese in France. While the Portuguese share the same religion with French or with other guest workers from predominantly Catholic Italy or Spain, they tend to keep close contacts with their home country through established networks. Conversely, Algerians in France, although Muslims and originating from the Maghreb region (similar to Moroccans) seem to have comparatively high intermarriage rates, despite the widespread collective negative image of Algerians that used to exist in France (Rosenberg 2006). Safi's study confirms strong differences in intermarriage patterns by ethnic origin, with European immigrants most likely to enter exogamous marriages, while non-Europeans opt for ethnic endogamy instead. Despite these general trends, some notable exceptions are both Tunisian men boasting intermarriage rates very close to those of European migrants and Portuguese whose intermarriage behaviour is more similar to Algerians than Italians. One of the most important conclusions of the French contribution is a pronounced intergeneration assimilation with regard to marital behaviour for all groups, apart from Turks and Portuguese.

All papers included in the volume call for gaining additional insights into the issue of ethnic intermarriage with datasets capturing attitudes, preferences, religious affiliation, and social embeddedness, as well as data designed to take individual unobserved heterogeneity into account. A need for data covering a whole variety of factors that might be able to affect partner choice among minority ethnic groups with a systematic distinction between individual resources and preferences (both at the structural and cultural level), third party influences, and structural constraints becomes even more salient as the analyses become increasingly differentiated with regard to possible partnership constellations, including transnational marriages and cohabitations. For example, a comparison of co-

habitation and marriage patterns, particularly among those minority ethnic groups in which cohabitation is unacceptable, might provide us with a better understanding of partnership decisions when it comes to spouses' individual choices (more pronounced in the case of cohabitation) vs. eventually forced marriage options. Finally, further comparative research in the area of interethnic marriage is urgently needed (for notable exceptions, see Model/Fisher, 2002³).

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Frank Kalter & Julia H. Schroedter

Transnational marriage among former labour migrants in Germany

Transnationale Ehen von ehemaligen Arbeitsmigranten in Deutschland

Abstract:

In this paper we make use of data from the official statistics to analyze transnational marriage among immigrants in Germany. Pooling all currently available Scientific Use Files of the German Microcensus between 1976 and 2004, we are able to contribute empirical findings that are unique in their scope and their degree of differentiation. We look at the five most common groups of former labour migrants and study group-specific trends over generations and time. Our empirical analysis is guided by four basic expectations, which are anchored in a more general theoretical framework of immigrants' marriage behaviour. We find, as expected, large group differences in the propensity to select a spouse from one's own country of origin. Assumed effects of the opportunity structure, however, can only be confirmed for women. Central derivations from a general assimilationist view are also only partly supported: A general increase in transnational marriages among ex-Yugoslav and Turkish women over marriage cohorts, and the absence of any effects of structural assimilation on the propensity toward transnational marriages are the most puzzling results.

Key words: transnational marriage, social integration, marriage behaviour of migrants, German Microcensus

Zusammenfassung:

In diesem Beitrag verwenden wir Daten der amtlichen Statistik, um transnationale Ehen bei Immigranten in Deutschland zu analysieren. Die Zusammenführung aller verfügbaren Scientific Use Files des deutschen Mikrozensus zwischen 1976 und 2004 liefert empirische Befunde, die in ihrer Breite und in der Tiefe ihrer Differenzierung bislang einzigartig sind. Wir betrachten die fünf am weitesten verbreiteten Gruppen ehemaliger Arbeitsmigranten und untersuchen gruppenspezifische Trends über die Generationen und über die Zeit. Unsere empirische Analyse wird von vier Grundannahmen geleitet, die in einem allgemeineren theoretischen Rahmen des Heiratsverhaltens von Migranten verankert sind. Wie erwartet finden wir hinsichtlich der Neigung, eine(n) Partner(in) aus dem jeweils eigenen Herkunftsland zu wählen, große Unterschiede zwischen den Gruppen. Die vermuteten Effekte der Opportunitätsstruktur werden jedoch nur für die Frauen bestätigt. Zentrale Schlussfolgerungen aus einer allgemein assimilationistischen Sichtweise zeigen sich ebenfalls nur teilweise: Zu den erstaunlichsten Ergebnissen unserer Studie gehören die allgemeine Zunahme transnationaler Ehen von Frauen aus dem ehemaligen Jugoslawien und der Türkei sowie die Abwesenheit von Effekten der strukturellen Assimilation auf die Neigung zur transnationalen Ehe.

Schlagwörter: transnationale Ehen, soziale Integration, Heiratsverhalten von Migranten, Mikrozensus

1. Introduction¹

Although the marriage behaviour of immigrants and their descendants is commonly seen as a key dimension of integration (Alba/Golden 1986; Gordon 1964; Lieberson/Waters 1988; Pagnini/Morgan 1990), research on the situation in Germany has been surprisingly scarce. Within the few empirical studies that recently became available, the focus is mainly on intermarriage, i.e., marriage to native Germans (Haug 2004, 2006; Klein 2001; Nauck 2007; Schroedter 2006; Schroedter/Kalter 2008). Little is known, however, on the phenomenon of transnational marriage, meaning marriage of an immigrant in Germany to a spouse residing in the country of origin. There is some scattered evidence that especially among Turks, transnational partner choice is an empirically important option (Janßen/Polat 2006: 47f; Schroedter 2006; Straßburger 2001, 2003), and occasional case-studies deliver helpful insights into individual motivations and situational conditions behind transnational partner choice (Aydin 2003; Straßburger 2001, 2003). Due to a lack of adequate large-scale data, however, sophisticated multivariate analyses were not possible for a long time. Only recently, González-Ferrer (2006) presented a first, more systematic approach relying on data of the German Socio-economic Panel (GSOEP).

Fortunately, in recent years an additional source of promising data arose: The German Microcensus has become widely available to social scientists, and Scientific Use Files have been produced for many years. Relying on this information it is now possible to study the marriage patterns among immigrants in Germany over a period of almost 30 years. In this paper we utilize these data to study transnational marriage behaviour and its causes in detail. More precisely, we are interested in differences among the five most common groups of former labour migrants, i.e., Italians, Spaniards, Greeks, ex-Yugoslavs, and Turks, and in group-specific trends over generations and time. We aim not only at a thorough description of these differences and trends, but we also test, as far as the data allow, whether basic theoretical mechanisms of immigrants' partner choice can account for them. In particular, we investigate the role of opportunity structures and of structural integration. We thus complement the earlier, survey-based findings of González-Ferrer (2006) by evidence from official data, and, given the sample size of our data set, enrich them by more fine-grained analyses in several respects.

The paper is structured as follows: We start with a discussion of theoretical approaches to immigrants' marriage behaviour, trying to deduce potential mechanisms underlying their choice of a transnational spouse (2.). We sketch a rather general framework and try to derive hypotheses on the specific phenomenon of transnational marriage choice by labour migrants in Germany. Within these discussions we pay specific attention to group differences, trends over generations and cohorts, the role of opportunity structures, and immigrants' integration into other spheres of life, especially structural integration. Afterwards, we describe the data structure and the relevant variables used in our analyses (3.). We then proceed to present the major results (4.). We report group differences and trends in transnational marriages, and test our leading hypotheses using multinomial logit

1 We would like to thank the guest editor, Irena Kogan, as well as two anonymous reviewers for helpful comments on an earlier version of this paper.

analyses. We conclude with a short summary of our most important findings and a discussion of subsequent research questions (5.).

2. Theory, hypotheses, and past research

While intermarriage is usually seen as a crucial indicator of social assimilation (Alba/Golden 1986; Gordon 1964; Lieberman/Waters 1990), which goes along with a successful general integration into the receiving country, transnational marriage is often understood as representing the opposite end of the same scale: Selecting one's partner from one's own country of origin is assumed to reflect strong orientations towards its norms and values, and weak bonds to the country of residence (Hooghiemstra 2001; Lievens 1999). Many, although not all, available arguments regarding the likelihood of transnational marriages thus arise as kind of reverse-versions of respective arguments on intermarriage. Therefore, it is helpful to start with a more general theoretical framework of immigrants' marriage behaviour, which in parallel refers to intermarriage, in order to understand potential mechanisms underlying the phenomenon of transnational marriage. This is done in the first of the following two sections (2.1). In the second section (2.2), we then try to formulate basic expectations that will guide our empirical analysis. They are derived from these general considerations regarding the specific immigration context in Germany. We also briefly discuss what empirical evidence for these expectations is now available.

2.1 General theories of immigrants' mate selection

In the literature on the marriage behaviour of immigrants, three basic strands of argument can be distinguished: arguments that focus on individual preferences, on influences of the social group, and on structural restrictions in the marriage market (Kalmijn 1991, 1998; Lieberman/Waters 1988). According to the first, the selection of a spouse is decisively affected by the preferences of an individual for specific characteristics in a mate. Among these characteristics, socioeconomic resources play an important role. Hence, individuals who have successfully accumulated these resources – i.e., a high level of education, income, and prestige – are seen to be especially attractive partners. Assuming that both partners want to maximize the socioeconomic status of their spouse, mechanisms of the marriage market are expected to lead to a high degree of homogeneity between the partners (Kalmijn 1998; Laitner 1991). From this general reasoning it is usually concluded that intermarriage will be more likely if the education level of an immigrant is high, as in many contexts natives tend to have higher mean levels of education. By the same token, one could argue that transnational marriages are more likely if the education level of an immigrant is low, as in many contexts the level of education in the country of origin is lower than that in the receiving country. Some authors have additionally argued that socioeconomic resources might also be exchanged for other goods (Merton 2000 [1941]). Accordingly, one could expect better educated immigrants to marry less educated natives in exchange for ethnicity, or less educated immigrants to marry better educated people in the country of origin in exchange for place of residence.

But individual preferences are not directed towards socio-economic resources alone. Rather, they are also guided by the rewarding character of the interaction itself. Usually, interaction is more rewarding if values and opinions as well as life styles, i.e., cultural resources of the interacting persons, are similar. The basic need for social recognition can be supplied more easily and cost-efficiently in a context of shared opinions and beliefs than in a context of diverging attitudes (Kalmijn 1998). Accordingly, a certain degree of cultural similarity promotes the establishment of long-term relationships. In the context of immigration one would therefore expect a higher inclination toward intermarriage if the level of cognitive and cultural assimilation to the receiving country is high, but a higher inclination toward transnational marriages if the level of cognitive and cultural assimilation is low.

The second starting point is the influence of the social group to which an individual belongs. Most obviously, if ethnic groups have specific expectations regarding the marriage behaviour of their members, like norms of ethnic endogamy, and if the group is a major source of social approval to the individual, this should result in barriers towards intermarriage (Hooghiemstra 2001; Kalmijn 1998). Norms of endogamy can be part of religious belief systems (Coleman 1994: 113; Reniers 2001). The actual strength of religious norms in partner selection depends on the religiosity of an individual. The most important social group that might be involved in the marriage decision of an immigrant is the family. Especially for individuals who are closely bound to family or kinship, family agreement with a potential spouse is of major relevance, and possible sanctions exercised by the family are avoided. According to some authors, a transnational marriage between kin might be a strategy of the family of origin to preserve the economic capital within the family (Aydin 2003: 251; Reniers 2001). In addition, relatives or family members in the country of origin are in a better position to exert pressure to marry off one of their children to a potential partner in Germany (or another western European country) than are non-relatives (Böcker 1994; Reniers 2001; Straßburger 2003: 276).

Third, the opportunity structure of the marriage market has a fundamental impact on the selection of a spouse: Who does not meet, does not mate (Blau 1994). Opportunities for contact are provided by the spatial context, on the one hand, and by affiliation to social groups, on the other hand (Blau 1994; Blau et al. 1984). If ethnic groups are very small or if they suffer from a strongly unbalanced sex ratio (or marriage squeeze), immigrants who are looking for a spouse will possibly intermarry, even if there is a strong preference for an ethnically homogeneous marriage. Another alternative in this case might be to enlarge the marriage market to include the immigrants' country of origin. This option is likely to be used especially if immigrants still have friends or relatives in their home country. Thus, the existence of transnational social networks is expected to promote transnational marriages. Opportunities often tend to be restricted to highly selective social foci, which determine individuals' chances to meet in the first place and to maintain a relationship afterwards (Feld 1981, 1984). Here, educational institutions, workplaces, and neighbourhoods have been shown to be important contexts (Kalmijn/Flap 2001; Model/Fisher 2002). Generally, the higher the ethnic segregation of these focal places, the lower is the probability of intermarriage. This is a further reason why the likelihood that immigrants will marry into the autochthonous population is assumed to increase with the degree of structural assimilation.

2.2 Leading hypotheses and previous empirical evidence

In this section, we will try to transform the described general mechanisms into more precise hypotheses about the propensity to marry a partner from the country of origin versus a co-national immigrant or versus an autochthonous partner. We will pay attention to the specific situation of groups of former labour migrants in Germany and briefly discuss previous empirical findings, where available. We concentrate on four basic expectations.

First, following the reasoning in the general theoretical approaches, one can expect pronounced *differences between different labour migrant groups* in Germany. For example, the degree of structural assimilation is known to vary largely between groups, Turks being clearly the most disadvantaged (Alba et al. 1994; Granato/Kalter 2001; Kalter/Granato 2007; Kalter et al. 2007; Kristen/Granato 2007). Among the five nationalities under consideration, they also show the largest cultural distance. In most of the cases they are of Muslim denomination, which holds also for immigrants from some parts of ex-Yugoslavia, showing a relatively high religiosity (Gostomski 2008). This includes rules of endogamy, most notably for Muslim women, which results in relatively low levels of intermarriage (Haug 2004; Schroedter/Kalter 2008). While these conclusions mainly rely on the mechanisms of preference and group influence discussed in Section 2.1, an additional important aspect fostering especially the transnational type of an intraethnic marriage is found on the demand side: Turkey and all but one of the countries formerly constituting Yugoslavia do not belong to the European Union. Therefore, the influx from these countries is subject to restrictive German immigration laws, unlike that from Italy, Greece, and Spain, whose citizens, being EU citizens, are granted unrestricted mobility and right of residence. For non-EU-foreigners who wish to migrate to Germany and do not have close family members already there, marrying a resident of Germany has been virtually the only way to gain legal entry since the stop of recruitment in 1973. In case of marriage to a German, an EU citizen, or to an immigrant possessing a full employment permit, the partner from abroad also obtains temporary residence and an employment permit. As a result, a transnational marriage may serve as a means to circumvent restrictive immigration policies (Beck-Gernsheim 2006; Hooghiemstra 2001). For several reasons, one would therefore expect that especially Turks, and on a lower level also ex-Yugoslavs, are more likely to be engaged in transnational marriages than the other labour migrant groups in Germany. This conclusion is supported by available empirical findings (González-Ferrer 2006; Janßen/Polat 2006; Kreienbrink/Rühl 2007: 44ff; Schroedter 2006; Straßburger 2001, 2003). In-depth studies further suggest that especially the group-influence mechanism seems to be important. Marriages among Turkish immigrants are often between relatives, e.g., between cousins, and tight family relations and transnational marriages seem closely associated (Aydin 2003; Böcker 1994; Gestring et al. 2006; Haug 2004; Reniers 2001). It is argued that due to a different 'marriage regime' that is primarily characterized by an intergenerational solidarity, the family has an especially high influence on the marriage decision of Turks (Nauck 2001). Among Turkish immigrants a marriage decision is often seen as a family matter rather than as an individual decision, and arranged marriages are still common (Aydin 2003: 271f; Beck-Gernsheim 2006: 116f; Timmerman 2006: 126).

Second, it would be reasonable to assume that the tendency toward *transnational marriages will decline over generations and time (marriage cohorts)*. As argued in the

general theoretical discussion (see the preference mechanism), the relative attractiveness of partners from the country of origin tends to be negatively related to one's own degree of assimilation into the receiving society. There is overwhelming evidence that for labour migrant groups in Germany, like for most immigrant groups all over the world, there is a clear trend towards assimilation over generations in most central sub-dimensions of integration, like language (Esser 2008), education (Alba et al. 1994), labour market success (Kalter/Granato 2007), residential areas (Janßen/Schroedter 2007), and also cultural orientations and preferences (Diehl/Schnell 2006; Gerhards/Hans 2009). There is also evidence that net of trends over generations, there are also trends over time (Kalter/Granato 2002; Kalter et al. 2007). However, it is important to note that there are also essential exceptions to this pattern, e.g., religion and religiosity, where the general diagnosis of intergenerational assimilation (in this case: secularization) does not seem to hold for Turkish immigrants (Diehl/König 2009). In our previous study focussing on intermarriage (Schroedter/Kalter 2008), we did not find a significant difference between first- and second-generation Turks of either sex. It will therefore be very interesting to see how this appears with respect to transnational marriages. González-Ferrer (2006) reports insignificant generation effects and no clear trend over marriage cohorts. Due to sample size, however, she was not able to differentiate generations and cohort effects for ethnic groups separately.

Third, we expect the opportunity structure in the marriage market for co-ethnic marriages in the receiving country to have an impact on the propensity toward transnational marriages. More precisely, we hypothesize that the larger the *size of an ethnic group* in Germany, the smaller should be the incentive for its members to choose a partner from their country of origin. And, the more favourable the *sex ratio* (opposite sex vs. one's own sex) of the ethnic group in the host society, the more likely should attractive candidates be available without having to cross the border. The predictions on the effect of both structural variables on transnational marriage thus parallel those on intermarriage with equal signs, as both are formulated in contrast to the comparison group of co-ethnic immigrant partners living in Germany. In the literature, the size of an immigrant group, as well as its sex ratio, have proved to be empirically important for intermarriage in many contexts (Hwang et al. 1997; Lieberson/Waters 1988; Lievens 1998; Pagnini/Morgan 1990; Tubergen/Maas 2007; Wildsmith et al. 2003), including Germany (Haug 2004; Klein 2001; Schroedter/Kalter 2008). With respect to transnational marriages, González-Ferrer (2006) finds strong support, at least for the sex ratio, that it works in the expected direction.

Fourth, one would expect that the propensity toward a transnational marriage choice is *negatively correlated to structural integration* into the receiving society. As outlined in the last section, this follows from the preference mechanism as well as from the idea that social foci provide important opportunity structures. Again, there is ample evidence for the impact of education in the case of intermarriage, for which, with the same basic arguments, a general positive correlation is hypothesized. Especially education has been shown to be positively linked to intermarriage (Fu/Heaton 2008; Kalmijn/Tubergen 2006; Tubergen/Maas 2007; Schroedter/Kalter 2008; Qian 1997; Wildsmith et al. 2003). However, evidence is less clear that the expected reverse signs show up when looking at transnational marriage. González-Ferrer (2006) can confirm this hypothesis only for men but not for women, which she finds one of her most puzzling results. A possible explanation for this fact is formulated by Lievens (1999) for women from cultures with a strong pa-

trilocal tradition: A woman who marries, so he argues, is expected to become a full member of her husband's family; she owes obedience to her mother-in-law and often the new couple lives with the parents of the husband for a while. A transnational marriage could be a mean, especially for highly educated women, to elude the direct influence of the in-laws. Furthermore, the traditional balance of power between husband and wife might be shifted to the woman's advantage: She is the one who knows how things work in the receiving society, has the necessary cultural resources, and offers a potential partner the opportunity to migrate if desired. In this respect, a woman could gain a lot from this marriage type, and the involved costs are low since 'such a marriage is fully accepted or even preferred by her parents' (Lievens 1999: 728). González-Ferrer (2006), however, cannot find any support for this hypothesis when running additional analyses with the GSOEP data.

3. Data and Methods

In our empirical analyses we use data from the German Microcensus, which is an annual official obligatory survey comprising one percent of the resident population. In the meantime, Scientific Use Files are available for many years, each consisting of a factually anonymized 70%-subsample. For our analyses we pool data from all currently available Scientific Use Files between 1976 and 2004.² This provides us with a large number of cases in a trend design and thus with a unique possibility to study immigrants' patterns of marriage over time.

We restrict our sample to the five major groups of former labour migrants and their descendants, i.e., Italians, Spaniards, Greeks, ex-Yugoslavs, and Turks. The definition of these groups has to rely on citizenship because the Microcensus did not ask for parents' country of birth until 2004. To avoid confounding the trends by German reunification and its aftermath, in all years we select only those members of these groups who were living in the Western part of Germany. For the purposes of our analysis, we choose only those immigrants who are married, and who were either born in Germany or had been living there for at least five years prior to their marriage. This restriction is made to ensure that the country of residence was part of the individuals' marriage market at the time of their marriage decision. Immigrants who had been staying in the host country for a shorter period prior to their marriage might already have had a partner or fiancé(e) in their country of origin, so that their partner choice actually took place before immigration.

Our dependent variable distinguishes between four *types of marriage*, according to the nationality of the spouse and, where required, his or her country of residence before marriage. More precisely, the variable includes the following categories: (1) Transna-

2 These are 19 datasets altogether, including the years 1976, 1978, 1980, 1982, 1985, 1987, 1989, 1991, 1993, and all years between 1995 and 2004. Note that the Microcensus is designed as a rotating panel in which every year one quarter of the selected households is renewed. As a consequence, there is a possible overlap of respondents in consecutive years. To account for this fact, we apply a design weight that weights each year with the inverse of the expected value of how often a household contained in this year is counted in total.

tional marriage is defined as marriage to a co-national partner, who immigrated either in the year of the marriage or thereafter.³ (2) Intramarriage is all other marriage to a partner of the same national origin. (3) Inter-marriage is marriage to an autochthonous, i.e., German, partner. Again, we have to rely on citizenship, which is a drawback of our data inasmuch as the conditions of and inclination toward naturalization changed during the period under study.⁴ We also subsume persons with dual citizenship (German and a foreign one) as ‘German partners’. (4) The remaining category is marriage between someone whose spouse has a nationality different from their own but other than German.

Besides *nationality*, we differentiate immigrants by *generation*, distinguishing between the first generation, the 1.5 generation, and the second generation. Immigrants of the first generation are defined as those coming to Germany after the age of 16, whereas the 1.5 generation consists of immigrants who arrived between the ages of 7 to 16. The second generation refers to those non-nationals who either arrived in Germany before the beginning of compulsory schooling (age 6) or were born in Germany. To account for possible interactions of nationality and generation, we construct 15 subgroups, combining both variables.

We include two macro level variables to control for variation in the composition of the ethnic minority groups over time: *relative group size* and *relative sex ratio*. Both variables represent the opportunity structure in Germany one year prior to marriage. The group size is the relative population size (expressed in percentages) of a given nationality among the non-married population in total. It is constructed age-specifically regarding the population in the age range five years younger, respectively older, than the respondent. To account for the fact that husbands are on average three years older than their wives, the mean of the interval is adjusted by -3 or +3 years when counting the population of the opposite sex. The sex ratio contrasts the sex imbalance of each nationality with that of the remaining population. This is done by taking the ratio (own group versus remaining population) of the respective sex ratios (opposite sex versus own sex). Again, the figures are calculated for the non-married population within the above-mentioned 11-year age intervals for both sexes. The information for the sex ratio and the population size were generated with non-weighted Microcensus data from 1962 to 2004 and were merged to the respondents by year of marriage, nationality and age at marriage.⁵ Both sex ratio and relative group size relate to the entire federal territory (Western Germany) and thus represent rather crude measures of the actual availability of potential partners. Nevertheless, at least for the Netherlands, van Tubergen

3 Please note that this is a somewhat arbitrary criterion as there is no clear timing between the marriage and the immigration of the ‘transnational partner’. We decided to choose a rather conservative operational definition, which might underestimate the actual number of transnational marriages.

4 The German citizenship law is one of the most restrictive in the EU. Before 1991, naturalization was almost not possible. Since 1991, migrants have been able to apply for naturalization after a minimum stay of 15 years in Germany (and the fulfilment of further conditions). In 2000, the legislation on naturalization was reformed entirely: The preconditions for naturalization were simplified (e.g., a reduction to 8 years of residence) and, furthermore, aspects of the ‘*ius soli*’ were integrated into the concept of naturalization so that – under certain conditions – children of foreign parents obtain German citizenship by birth.

5 Because the nationality of Greek, Turkish and Yugoslavian immigrants is not declared separately in the Microcensus data from 1962 to 1969, the rates of these nationalities could be generated only for years from 1973 onwards. Due to absent Microcensus years, we had to merge years of marriages for which no information was available with the information of the closest available (possibly previous) year.

and Maas (2007) showed that the effects of relative group size and sex ratio on ethnic intermarriage do not vary much on the local (municipality) or on the national level.

On the individual level, our central independent variable is *educational attainment*. It is measured according to the updated version of the educational classification CASMIN (Brauns/Steinmann 1999). Altogether, we differentiate ten categories, including a category for persons who are still in school. Persons who have not completed any education are subsumed under those for whom information on education is missing. This was necessary due to modifications in the survey questions on education during different Microcensus years (Schroedter 2008: 21f). Note that in our data, education is measured at the time of the survey and not, as would be preferable, at the time of marriage. We think, however, that resulting biases will only be small; massive change in educational attainment (in terms of CASMIN) tends to be a rare event after marriage.

Further control variables are *marriage cohort* and *age at marriage*. All analyses are conducted separately for men and women. The sample sizes vary for descriptive and multivariate analysis due to missing values and excluded categories. For men, the weighted number of cases amounts to 9,679 resp. 9,238 (unweighted: 25,597 resp. 24,269), for women to 5,985 resp. 5,634 (unweighted: 16,228 resp. 15,189). Descriptive statistics for the variables used in our empirical analysis can be found in Tables 4a and 4b in the appendix.

When interpreting the results of the empirical analyses below, one should keep in mind that despite all advantages and merits, there is a basic shortcoming to the German Microcensus data. Like all studies that rely on data collected in the receiving country only, there can deliver information only on those marriages of immigrants in Germany where both partners decided to live on in Germany afterwards. This is unlikely to happen at random. On the contrary, there is reason to believe that this holds especially for the transnational type, and tendentially is more likely if the immigrant residing in Germany is female. So, there is probably some selection bias in the sample when referring to a target population of all immigrants who marry while living in Germany.

4. Results

The presentation of our empirical analyses is subdivided into three subsections. First, we will report some descriptive results showing the main trends of transnational marriages over generations and marriage cohorts. Then, we test in how far these trends can be explained by changes in opportunity structures and changes in the educational attainment of the immigrants living in Germany. While the second section concentrates on group and generation differences, accounting only for an overall trend over time, the third section looks at group-specific trends.

4.1 Transnational marriage in Germany: Occurrence, group differences, and trends

Table 1a reports the marriage patterns among male immigrants in Germany according to the pooled Microcensus data. In total, about a third (33.2%) of all marriages is of the

transnational type. Choosing a co-national partner living in Germany is the prevailing strategy (40.8%), while bi-national marriage to a German wife ranks third (23.0%) and wives with other nationality play only a minor role (3.1%). Differentiating by nationality, there are large differences between groups. Transnational marriage is the most frequent type among male Turkish immigrants, making up almost half of all cases within this group. The transnational type is of considerable, albeit lower, importance also among ex-Yugoslavs, while Italian, Spanish, and Greek immigrants rarely choose a wife from their country of origin. We find that in most of the cases Italian and Spanish men are even married to German wives.

Differentiating further by generations, we find a notable decline in the prevalence of transnational marriages from the first to the second generation for all five groups. The pattern is clear and especially pronounced among Italians and Spaniards, for whom the rate is modest in the first generation (20.6%, resp. 21.1%), even lower in the 1.5 generation (15.9%, resp. 10.1%), and almost negligible in the second generation (4.6%, resp. 3.3%). Among Greeks, the drop from the first to the second generation is of a comparable magnitude (20.2% to 8.8%); however, the 1.5 generation behaves similarly (20.8%) to the first. Among Turks and ex-Yugoslavs there is also no decline between the first generation (48.9%, resp. 30.3%) and the 1.5 generation (54.8%, resp. 31.2%); however, even in these two groups a decline, albeit on a much higher level, from the 1.5 generation to the second generation (35.9%, resp. 20.9%) is clearly visible.

Table 1a: Nationality of spouse and type of marriage of male migrants by nationality and generation (row percentages)

Nationality & generation (husband)		Same nationality (wife)		Other nationality		N
		Transnational	Co-national immigrant	German	Other	
Italian	1 st gen.	20.6	29.5	45.1	4.9	1,507
	1.5 gen.	15.9	41.2	39.2	3.7	698
	2 nd gen.	4.6	37.0	50.5	7.8	349
	<i>Total</i>	<i>17.1</i>	<i>33.7</i>	<i>44.2</i>	<i>5.0</i>	<i>2,553</i>
Spanish	1 st gen.	21.1	37.3	34.0	7.6	240
	1.5 gen.	10.1	44.5	42.3	3.1	114
	2 nd gen.	3.3	31.4	60.1	5.3	87
	<i>Total</i>	<i>14.8</i>	<i>38.0</i>	<i>41.3</i>	<i>6.0</i>	<i>441</i>
Greek	1 st gen.	20.2	51.3	24.2	4.3	475
	1.5 gen.	20.8	58.8	16.9	3.5	257
	2 nd gen.	8.8	53.0	29.1	9.2	164
	<i>Total</i>	<i>18.3</i>	<i>53.8</i>	<i>23.0</i>	<i>5.0</i>	<i>896</i>
Turkish	1 st gen.	48.9	36.8	12.8	1.5	1,209
	1.5 gen.	54.8	38.5	5.6	1.0	2,134
	2 nd gen.	35.9	52.2	10.5	1.4	991
	<i>Total</i>	<i>48.9</i>	<i>41.2</i>	<i>8.7</i>	<i>1.2</i>	<i>4,333</i>
ex-Yugoslav	1 st gen.	30.3	46.2	20.6	3.0	1,057
	1.5 gen.	31.2	39.7	25.9	3.1	242
	2 nd gen.	20.9	45.2	29.8	4.0	157
	<i>Total</i>	<i>29.4</i>	<i>45.0</i>	<i>22.5</i>	<i>3.2</i>	<i>1,456</i>
Total		33.2	40.8	23.0	3.1	9,679

Source: Microcensus Scientific Use Files 1976-2004 (19 files)

As Table 1b shows, the picture is very different when turning to the marriage behaviour of female immigrants in Germany. Most notably, a transnational choice of husband is much less common than a transnational choice of wife. In total, only 18.0 percent of all immigrant women in Germany select their marriage partner from their own country of origin. Transnational marriages are very rare events among Italian and Spanish women and also not very common among Greeks and ex-Yugoslavs. Turkish women show by far the highest share (31.2%). Surprisingly, there is no clear pattern of decline over generations for any of the groups. By and large, with some minor variations, the marriage patterns among female immigrants in Germany seem to be independent of generational status.

Table 1b: Nationality of spouse and type of marriage of female migrants by nationality and generation (row percentages)

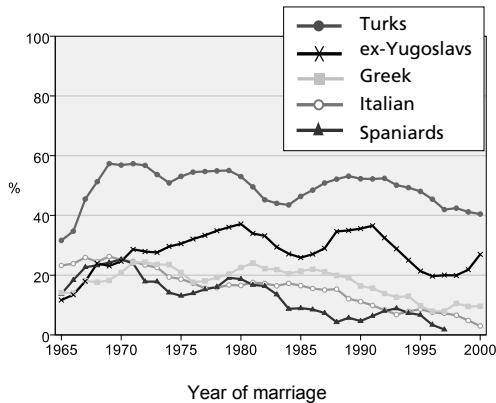
Nationality & Generation (wife)		Same nationality (husband)		Other nationality		N
		Transnational	Co-national immigrant	German	Other	
Italian	1 st gen.	1.7	66.3	25.7	6.3	196
	1.5 gen.	2.6	80.5	14.1	2.8	501
	2 nd gen.	3.0	63.5	27.1	6.5	439
	<i>Total</i>	<i>2.6</i>	<i>71.5</i>	<i>21.1</i>	<i>4.8</i>	<i>1,136</i>
Spanish	1 st gen.	0.7	58.4	30.3	10.7	100
	1.5 gen.	1.4	60.0	30.8	7.9	97
	2 nd gen.	0.3	39.0	47.1	13.6	97
	<i>Total</i>	<i>0.8</i>	<i>52.5</i>	<i>36.0</i>	<i>10.7</i>	<i>294</i>
Greek	1 st gen.	2.3	68.8	22.7	6.2	154
	1.5 gen.	12.5	69.9	12.9	4.8	238
	2 nd gen.	7.8	70.7	14.9	6.6	224
	<i>Total</i>	<i>8.2</i>	<i>69.9</i>	<i>16.1</i>	<i>5.8</i>	<i>616</i>
Turkish	1 st gen.	24.7	60.0	12.7	2.6	355
	1.5 gen.	36.1	60.2	2.7	1.1	1,420
	2 nd gen.	27.0	66.0	5.7	1.4	1069
	<i>Total</i>	<i>31.2</i>	<i>62.4</i>	<i>5.1</i>	<i>1.4</i>	<i>2,844</i>
ex-Yugoslav	1 st gen.	5.4	57.3	31.8	5.4	595
	1.5 gen.	14.7	55.6	24.4	5.3	282
	2 nd gen.	16.2	51.6	25.8	6.5	218
	<i>Total</i>	<i>9.9</i>	<i>55.8</i>	<i>28.7</i>	<i>5.6</i>	<i>1,095</i>
Total		18.0	63.2	15.1	3.7	5985

Source: Microcensus Scientific Use Files 1976-2004 (19 files)

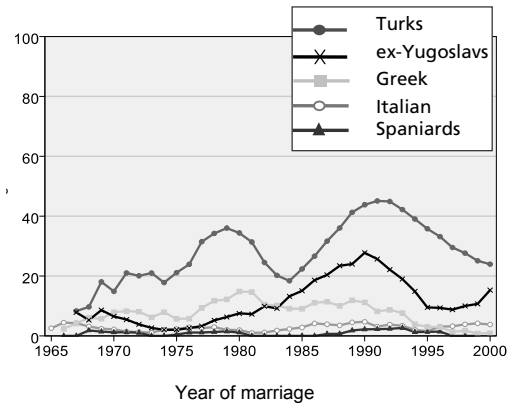
Beyond trends of transnational marriages over generations, we are interested in trends over time. Figure 1 displays the percentage of transnational marriages for each nationality over the marriage cohorts 1965 to 2000, separately for men and women. For men, the graphs indicate a slight decline among all groups except ex-Yugoslavs. The decline is pronounced and happened almost steadily among Italians, Spaniards, and Greeks. Turkish migrants, as already shown in Table 1a, have by far the highest percentage of transnational wives throughout all cohorts. For marriage cohorts 1971 and later, ex-Yugoslavs rank second. Even in the younger marriage cohorts, over 40 percent of the marriages among Turkish migrants are transnational, while among the ex-Yugoslav migrants the rates in the younger cohorts vary between 20 and 30 percent.

Figure 1: Trends of transnational marriages of different immigrant groups over marriage cohorts (five-year moving average), in percentages

a. Men



b. Women



Source: Microcensus Scientific Use Files 1976-2004 (19 files)

Figure 1b presents the propensity towards transnational marriage over marriage cohorts for women. We find that that the trends are less clear than in the case of men. The trend among the Turkish females is especially eye-catching. After an increase from 8 percent in 1965 to 36 percent in 1979, the rate dropped sharply to 18 percent again in 1984, rising to 45 percent in 1991, before continuously declining afterwards to 24 percent in 2000. Among ex-Yugoslav women we monitor a continuous increase in transnational marriages from 2 percent in 1974 to 28 percent in 1990, before the figures begin to decrease to 9 percent in 1996, slightly rising again in the youngest marriage cohorts. Among Italian or Spanish women transnational marriages never played an important role at all: Between the marriage cohorts 1965 to 2000, their quotas never surmounted 5 percent. Greek females also indicate low probabilities of transnational marriages; after a peak in 1980 (15%); the percentage has been continuously decreasing, amounting to less than 1 percent in the marriage cohort 2000.

4.2 Multivariate analyses of group and generation differences

In this section we apply multivariate models to analyze the likelihood of choosing a particular type of marriage among the different types. More precisely, we rely on multinomial logistic regression models using a dependent variable that has three possible values: transnational marriage, bi-national marriage to a German partner, and marriage to a conational migrant. The latter serves as the baseline category. Marriages to partners of other nationalities, the fourth type distinguished in Tables 1a and 1b, are neglected and treated as missing values. We study the effect of variables that are related to the theoretical mechanisms and hypotheses discussed above (see Section 2) and which are available in the Microcensus data (see Section 3). We run separate analyses for the sub-samples of immigrant men and immigrant women.

Table 2a: Multinomial logit coefficients for type of marriage (ref. marriage with co-national) of male immigrants

	Model 1		Model 2		Model 3	
	B	SE	B	SE	B	SE
Transnational marriage (wife from own country of origin)						
Group (ref. Turkish 1.5 gen.)						
Italian 1 st gen.	-0.81***	0.10	-0.67***	0.13	-0.67***	0.13
Italian 1.5 gen.	-1.35***	0.12	-1.15***	0.14	-1.15***	0.14
Italian 2 nd gen.	-2.37***	0.27	-2.16***	0.28	-2.14***	0.28
Spanish 1 st gen.	-1.04***	0.19	-0.84***	0.20	-0.84***	0.20
Spanish 1.5 gen.	-1.88***	0.33	-1.59***	0.34	-1.57***	0.34
Spanish 2 nd gen.	-2.61***	0.62	-2.30***	0.63	-2.27***	0.63
Greek 1 st gen.	-1.41***	0.14	-1.26***	0.15	-1.24***	0.15
Greek 1.5 gen.	-1.42***	0.17	-1.16***	0.18	-1.15***	0.18
Greek 2 nd gen.	-2.02***	0.29	-1.73***	0.30	-1.71***	0.30
Turkish 1 st gen.	-0.17	0.09	-0.09	0.10	-0.07	0.10
Turkish 2 nd gen.	-0.56***	0.09	-0.70***	0.09	-0.69***	0.09
ex-Yugoslav 1 st gen.	-0.88***	0.10	-0.86***	0.10	-0.83***	0.10
ex-Yugoslav 1.5 gen.	-0.61***	0.16	-0.39*	0.17	-0.37*	0.17
ex-Yugoslav 2 nd gen.	-0.95***	0.22	-0.79***	0.23	-0.76***	0.23
Age at marriage (cent. 27 yrs.)	0.01	0.00	0.02**	0.00	0.01**	0.00
Marriage cohort (cent. 1985)	-0.00	0.00	-0.01*	0.00	-0.01*	0.00
Rel. group size			0.18***	0.04	0.17***	0.04
Rel. sex ratio			0.10	0.10	0.09	0.10
Education (ref. 1b)						
Not applicable & no education					-0.03	0.08
1c (basic voc. training)					-0.12*	0.06
2b (intermediate general)					-0.06	0.16
2a (intermediate voc.)					-0.01	0.10
2c_gen (general maturity)					-0.09	0.23
2c_voc (voc. maturity)					-0.19	0.18
3a (lower tertiary)					-0.39	0.29
3b (higher tertiary)					-0.37	0.27
Still in school					-0.21	0.25
Constant	0.40***	0.05	-0.03	0.15	0.02	0.15
Bi-national marriage to a German wife						
Group (ref. Turkish 1.5 gen.)						
Italian 1 st gen.	2.11***	0.13	1.61***	0.16	1.65***	0.16
Italian 1.5 gen.	1.84***	0.13	1.35***	0.16	1.43***	0.16
Italian 2 nd gen.	2.14***	0.16	1.70***	0.18	1.62***	0.18
Spanish 1 st gen.	1.54***	0.20	1.02***	0.22	0.99***	0.22
Spanish 1.5 gen.	1.85***	0.23	1.36***	0.25	1.25***	0.25
Spanish 2 nd gen.	2.38***	0.26	2.00***	0.28	1.78***	0.28
Greek 1 st gen.	0.81***	0.17	0.43*	0.18	0.26	0.18
Greek 1.5 gen.	0.60**	0.20	0.22	0.22	0.14	0.22
Greek 2 nd gen.	1.25***	0.21	0.83***	0.23	0.61*	0.24
Turkish 1 st gen.	0.42**	0.15	0.22	0.15	0.10	0.16
Turkish 2 nd gen.	0.28	0.15	0.44**	0.16	0.31	0.17
ex-Yugoslav 1 st gen.	0.68***	0.14	0.64***	0.14	0.44**	0.15
ex-Yugoslav 1.5 gen.	1.39***	0.19	1.15***	0.20	1.05***	0.20
ex-Yugoslav 2 nd gen.	1.38***	0.23	1.23***	0.23	0.99***	0.24
Age at marriage (cent. 27 yrs.)	0.04***	0.00	0.04***	0.00	0.04***	0.01
Marriage cohort (cent. 1985)	0.01**	0.00	0.02***	0.00	0.01**	0.00

	Model 1		Model 2		Model 3	
	B	SE	B	SE	B	SE
Rel. group size of nat.			-0.21***	0.06	-0.22***	0.06
Rel. sex ratio			-0.49***	0.12	-0.44***	0.12
Education (ref. 1b)						
Not applicable & no education					-0.37**	0.12
1c (basic voc. training)					0.45***	0.07
2b (intermediate general)					0.58**	0.18
2a (intermediate voc.)					0.80***	0.11
2c_gen (general maturity)					0.86***	0.25
2c_voc (voc. maturity)					0.98***	0.18
3a (lower tertiary)					1.32***	0.25
3b (higher tertiary)					1.65***	0.22
Still in school					1.00***	0.28
Constant	-1.74***	0.10	-0.81***	0.20	-1.12***	0.21
χ^2 -Wert	2039.95		2107.15		2363.18	
Mc Fadden-Pseudo-R ²	0.103		0.106		0.119	
N	9,238		9,238		9,238	

significance: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: Microcensus Scientific Use Files 1976-2004 (19 files),

Table 2a reports log-odds effects and their standard errors from different models for men. Model 1 only includes the variables for various groups by generation, along with controls for age and year of marriage. In principle, the estimates reproduce the basic findings from Table 1a. As Turkish men of the 1.5 generation have the highest shares of transnational marriages, they serve as the reference category. Accordingly, in Model 1 all other categories have lower odds of choosing a transnational vs. a co-national immigrant wife. Except for those of Turks of the first generation, all coefficients are significantly different from zero. For Italians, Spanish, and Greek male immigrants the odds of choosing a wife from the home country decreases from the first generation over the 1.5 generation to the second generation. Looking at the standard errors, we find that the differences between the first and second generation are significant for all groups except ex-Yugoslavs. Neither of the two control variables has a significant effect. In particular, the coefficient of year of marriage is almost zero, meaning that there is no underlying overall trend in transnational marriages once we control for groups and generations.

Addressing the odds of bi-national marriage to a German (vs. co-national marriage), it turns out that all coefficients for groups by generations are positive, meaning that Turks of the 1.5 generation, the reference category, have the lowest odds of choosing a German wife. The patterns between generations within groups are not clearly shaped. The differences between groups, however, are remarkable: As was already shown in Table 1a, Italian and Spanish male immigrants choose German wives relatively often, Greek and ex-Yugoslavs follow on a lower level, and of all groups, Turks clearly have the lowest rates of intermarriage to Germans. Immigrant men who marry German wives are somewhat older than those who marry co-national wives, and, very importantly, net of all group-by-generation differences, we can detect a significant positive trend towards bi-national marriage over marriage cohorts.

In Model 2, two macro level variables are added to control for the group-specific opportunity structure in the marriage market. Let us start by discussing the sub-model for bi-

national marriage first, where we find that both coefficients are significantly negative. This is in accordance with the theoretical assumptions: The larger the size of a national group in the receiving society and the higher the relative share of females within the national group, the larger is the supply of co-national marriage partners (the baseline category), and the lower, accordingly, the odds of choosing a German wife. When we compare the effects for nationality-by-generation categories to those in Model 1, we find that most of them are notably smaller. Thus, the opportunity structure can partly explain group and generation differences in bi-national marriage. It is also interesting to see that the effect of marriage increases from Model 1 to Model 2, meaning that accounting for the opportunity structure (getting 'better') over time, the positive trend towards a bi-national marriage choice by labour migrants in Germany is even more pronounced. Looking at the sub-model for transnational marriage, however, the picture is less clear and theory-conform. Neither structural variable shows the negative effects to be expected but rather positive signs, even significant in the case of group sizes. And, control of both variables also leads only to minor changes in the strength of the groups-by-generation effects.

Model 3 includes the level of educational attainment, and we find that this variable can also hardly account for the group and generation differences in transnational marriage choice. As compared to Model 2, the group-by-generation coefficients remain more or less unchanged. This is obviously due to the fact that education has almost no impact at all on the odds of choosing a partner from one's own country of origin. In the coefficients for different categories of the CASMIN scheme there is at most a very slight tendency that males with higher levels of education, esp. with tertiary education, are less likely to have a transnational wife; however, by and large, coefficients do not differ significantly. Accordingly, the theoretical expectation that the relative chances of transnational marriage decrease with the increasing level of educational attainment is not confirmed. In contrast, education is clearly important when looking at the odds of bi-national marriage. As theoretically expected, the higher their qualifications, the more likely are immigrant men to choose a German vs. a co-national wife. In spite of this fact, different degrees in educational attainment cannot explain existing group and generation differences in bi-national marriage choice very well, as the group-by-generation coefficients do not change considerably between Model 2 and Model 3. It is worth noting, however, that the effect of marriage cohort lessens notably when controlling for education in Model 3. So, structural educational assimilation over cohorts seems to explain part of the trend towards higher intermarriage rates.

Table 2b reports the corresponding results of the different models for women. Let us start here by discussing the whole upper part first, meaning the sub-models on the odds of marrying a partner from one's own country of origin versus a co-national immigrant. Model 1 shows the log-odds effects for nationality-by-group categories. We find that compared to the reference category of 1.5-generation Turks, almost all groups are less likely to marry a transnational partner. This largely reflects the descriptive findings in Table 1b above. Only Turks of the first generation show slightly higher odds, now that age at marriage and marriage cohort are controlled for. In accordance with Table 1b, we further see that in contrast to the findings for men, for all of the groups there is no clear trend over generations: Surprisingly, only Turkish women show significantly lower odds of having a transnational husband in the second generation as compared to the first generation. Note

that both control variables are highly significant in the case of females. The older a woman, the less likely is she to marry someone from her country of origin (relative to a co-national living in Germany). And, most importantly, net of the group-by-generation differences, we detect a positive overall trend over marriage cohorts.

Table 2b: Multinomial logit coefficients for type of marriage (ref. marriage with co-national) of female immigrants

	Model 1		Model 2		Model 3	
	B	SE	B	SE	B	SE
Transnational marriage (husband from own country of origin)						
Group (ref. Turkish 1.5 gen.)						
Italian 1 st gen.	-2.58***	0.56	-1.98**	0.62	-2.00**	0.62
Italian 1.5 gen.	-2.62***	0.29	-2.37***	0.33	-2.38***	0.33
Italian 2 nd gen.	-2.48***	0.29	-2.49***	0.31	-2.54***	0.31
Spanish 1 st gen.	-3.32**	1.24	-3.09*	1.25	-3.05*	1.25
Spanish 1.5 gen.	-2.89***	0.87	-2.96***	0.88	-2.98***	0.88
Spanish 2 nd gen.	-4.21*	1.81	-4.53*	1.81	-4.59*	1.81
Greek 1 st gen.	-2.17***	0.56	-2.18***	0.56	-2.15***	0.56
Greek 1.5 gen.	-0.89***	0.21	-1.12***	0.22	-1.11***	0.22
Greek 2 nd gen.	-1.63***	0.26	-1.91***	0.28	-1.89***	0.28
Turkish 1 st gen.	0.08	0.15	0.03	0.15	0.04	0.16
Turkish 2 nd gen.	-0.51***	0.10	-0.31**	0.10	-0.30**	0.10
ex-Yugoslav 1 st gen.	-1.27***	0.21	-1.27***	0.21	-1.29***	0.21
ex-Yugoslav 1.5 gen.	-0.68***	0.19	-0.88***	0.19	-0.91***	0.19
ex-Yugoslav 2 nd gen.	-0.67**	0.21	-0.89***	0.22	-0.90***	0.22
Age at marriage (cent. 24 yrs.)	-0.05***	0.01	-0.06***	0.01	-0.06***	0.01
Marriage Cohort (cent. 1985)	0.04***	0.01	0.05***	0.01	0.05***	0.01
Rel. group size			-0.26***	0.06	-0.25***	0.06
Rel. sex ratio			-0.34*	0.14	-0.32*	0.14
Education (ref. 1b)						
Not applicable & no education					0.00	0.11
1c (basic voc. training)					0.23*	0.10
2b (intermediate general)					-0.06	0.19
2a (intermediate voc.)					0.09	0.15
2c_gen (general maturity)					-0.25	0.40
2c_voc (voc. maturity)					-0.20	0.35
3a (lower tertiary)					0.03	0.76
3b (higher tertiary)					0.27	0.48
Still in school					-0.87**	0.32
Constant	-0.61***	0.06	0.12	0.16	0.05	0.16
Bi-national marriage to a German husband						
Group (ref. Turkish 1.5 gen.)						
Italian 1 st gen.	1.81***	0.25	1.56***	0.26	1.46***	0.27
Italian 1.5 gen.	1.42***	0.21	1.20***	0.22	1.20***	0.23
Italian 2 nd gen.	2.16***	0.20	1.90***	0.22	1.68***	0.22
Spanish 1 st gen.	2.34***	0.29	2.03***	0.31	1.87***	0.31
Spanish 1.5 gen.	2.57***	0.28	2.21***	0.31	2.02***	0.31
Spanish 2 nd gen.	3.23***	0.28	2.86***	0.30	2.50***	0.31
Greek 1 st gen.	1.66***	0.27	1.43***	0.28	1.20***	0.29
Greek 1.5 gen.	1.46***	0.26	1.16***	0.28	1.02***	0.28
Greek 2 nd gen.	1.43***	0.26	1.10***	0.28	0.76**	0.28
Turkish 1 st gen.	1.17***	0.24	1.05***	0.25	0.96***	0.25

	Model 1		Model 2		Model 3	
	B	SE	B	SE	B	SE
Turkish 2 nd gen.	0.57**	0.22	0.79***	0.23	0.68**	0.24
ex-Yugoslav 1 st gen.	2.11***	0.20	2.11***	0.20	1.89***	0.20
ex-Yugoslav 1.5 gen.	2.16***	0.22	1.95***	0.23	1.75***	0.23
ex-Yugoslav 2 nd gen.	2.20***	0.24	2.04***	0.25	1.73***	0.25
Age at marriage (<i>cent. 24 yrs.</i>)	0.05***	0.01	0.04***	0.01	0.05***	0.01
Marriage Cohort (<i>cent. 1985</i>)	0.02***	0.00	0.03***	0.01	0.01*	0.01
Rel. group size			-0.27**	0.09	-0.25**	0.09
Rel. sex ratio			0.05	0.03	0.02	0.03
Education (<i>ref. 1b</i>)						
Not applicable & no education					-0.47**	0.17
1c (basic voc. training)					0.64***	0.10
2b (intermediate general)					0.49*	0.20
2a (intermediate voc.)					0.93***	0.14
2c_gen (general maturity)					1.12***	0.29
2c_voc (voc. maturity)					0.99***	0.23
3a (lower tertiary)					1.57***	0.45
3b (higher tertiary)					1.56***	0.31
Still in school					0.65*	0.32
Constant	-3.09***	0.17	-2.71***	0.22	-2.91***	0.22
χ^2 -Wert	1477.76		1516.64		1660.50	
Mc Fadden-Pseudo-R ²	0.148		0.152		0.166	
N	5,634		5,634		5,634	

significance: * p < 0.05, ** p < 0.01, *** p < 0.001

Source: Microcensus Scientific Use Files 1976-2004 (19 files),

When the structural variables are included in Model 2, we find that both have significantly negative effects in accordance with the theoretical expectations: the larger the size of a group in the receiving country and the higher the ratio of men vs. women within a group, the lower the odds of marrying a partner from one's country of origin. Controlling for the opportunity structure in this way, the effect of the marriage cohort increases (compared to Model 1). This means that controlling for changes in the marriage market for co-nationals in Germany, the net trend towards transnational marriage is even more pronounced. By and large, the two structural variables can not account for the differences between nationalities and generations, as most coefficients do not change very much between Model 1 and Model 2. In Model 3 one finds that, as in the case of men, educational qualifications do not play an important role in explaining the odds of marrying a transnational partner.

Finally, and for the sake of completeness, we briefly want to highlight the most important findings in the lower part of Table 2b, which deals with the odds of marrying a German vs. a co-national husband. Controlling only for age at marriage and marriage cohort, Turkish women in all generations have the lowest odds of marrying a German husband. At the other extreme, Spaniards have by far the highest share of intermarriages, followed by ex-Yugoslavs and Italians. Astonishingly, among Turkish females, those who belong to the first generation have even (significantly) higher odds than those who belong to the second. Among Greek and ex-Yugoslav females there are hardly any differences between generations, and they are also not very pronounced in the case of Italians. Only

Spanish women of the second generation show significantly higher odds of a bi-national marriage than those of the first generation, as one would expect from a general inter-generational assimilation perspective. Net of these differences, we find a significant positive trend in intermarriage over marriage cohorts. The trend is even stronger, once we control for opportunity structure in Model 2. Of the two variables, however, only relative group size has a significant effect in the theoretically expected direction. The structural variables also cannot explain much of the group and generation differences. Model 3 shows that the odds of marrying a German husband tend to increase with higher education. The effects are less pronounced, however, than in the case of men. Nevertheless, education seems important in explaining the trend over marriage cohorts, as the effect lessens notably in Model 3. It also adds a little bit to explaining the group and generation differences; however, the coefficients of the group-by-nationality variables in Model 3 are still remarkable.

4.3 Group-specific trends over marriage cohorts

The analyses in the last section have shown that accounting for group and generation differences, the odds that immigrant women will marry a partner from the country of origin rather than a co-national from the receiving society have grown over marriage cohorts. Controlling for the opportunity structure, the trend is even more pronounced. For men no gross trend exists; once controlling for the structural variables, the tendency is slightly negative. The trends in Tables 2a and 2b are general in the sense that the impact of marriage cohorts is assumed to be the same for all nationality groups involved. However, in Figures 1a and 1b we have seen that the patterns over cohorts differ somewhat between the groups involved. Therefore, we re-ran our analyses including group-specific trends, i.e., interactions between nationality groups and marriage cohorts. Table 3 presents the effect of the interaction terms taken from different models.

Model 0 controls only for nationality and age at marriage. Speaking visually, it fits linear trends to the developments in Figure 1a above. We find that among Italians there is a significant decline in the odds of choosing a transnational partner. Except for the ex-Yugoslavs, the trend is also negative among the other groups; however, all coefficients, including that for former Yugoslavs, fail to be significant. In Model 1 we differentiate also by generations within groups, so this analysis is similar to Model 1 in Table 2a above. Now, the amount of the negative coefficient for Italians is, as also for three other groups, slightly reduced. This suggests that the decline in transnational marriage is partly due to the process of intergenerational change. However, it does not seem to be connected to changes in opportunity structures or to processes of structural integration in terms of educational attainment: None of the coefficients changes notably in Model 2 and Model 3.

Table 3: Effects of the interaction between marriage cohort and nationality, controlled by different variables

Under control of: (& age at marriage)	Model 0 Nationality		Model 1 Nationality & generation		Model 2 Nationality, genera- tion, group size & sex ratio		Model 3 Nationality, genera- tion, group size, sex ratio & education	
	B	SE	B	SE	B	SE	B	SE
Men:								
<i>Transnational</i>								
Italian	-0.03***	0.01	-0.02***	0.01	-0.02**	0.01	-0.02**	0.01
Spanish	-0.03	0.02	0.01	0.02	0.01	0.02	0.01	0.02
Greek	-0.01	0.01	-0.00	0.01	-0.00	0.01	-0.00	0.01
Turkish	-0.01	0.00	0.00	0.00	-0.01	0.01	-0.01	0.01
ex-Yugoslav	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
<i>Bi-national</i>								
Italian	-0.00	0.00	-0.00	0.01	-0.00	0.01	-0.00	0.01
Spanish	0.06***	0.01	0.04**	0.02	0.06**	0.02	0.05**	0.02
Greek	0.01	0.01	0.00	0.01	0.00	0.01	-0.01	0.01
Turkish	0.02**	0.01	0.03***	0.01	0.05***	0.01	0.04***	0.01
ex-Yugoslav	0.04***	0.01	0.03***	0.01	0.03***	0.01	0.03***	0.01
Women:								
<i>Transnational</i>								
Italian	0.03	0.02	0.02	0.02	-0.02	0.03	-0.02	0.03
Spanish	0.05	0.08	0.08	0.08	0.06	0.08	0.06	0.09
Greek	-0.00	0.02	-0.01	0.02	-0.01	0.02	-0.01	0.02
Turkish	0.03***	0.01	0.04***	0.01	0.06***	0.01	0.06***	0.01
ex-Yugoslav	0.05***	0.01	0.04***	0.01	0.04***	0.01	0.04***	0.01
<i>Bi-national</i>								
Italian	0.03***	0.01	0.02**	0.01	0.03**	0.01	0.02	0.01
Spanish	0.08***	0.02	0.06***	0.02	0.06***	0.02	0.05**	0.02
Greek	0.02	0.01	0.02	0.01	0.02	0.01	0.01	0.01
Turkish	0.05***	0.01	0.06***	0.01	0.07***	0.01	0.07***	0.01
ex-Yugoslav	0.00	0.01	-0.00	0.01	-0.00	0.01	-0.02	0.01

significance: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: Microcensus Scientific Use Files 1976-2004 (19 files),

Among all groups of women except Greeks we find positive trends towards a transnational marriage choice. These trends are significant in the case of Turks and of ex-Yugoslavs. Controlling for generations in Model 1, the interaction effect for ex-Yugoslavs slightly decreases, meaning that the surprising fact that ex-Yugoslav women of the second generation, more so than those of the first and 1.5 generations, are likely to engage in transnational marriages (see Table 2b), accounts for parts of the rise over cohorts. The trend stays stable even when controlling for opportunity structure (Model 2) and educational attainment (Model 3). Among Turkish women the positive trend is even more pronounced when controlling also for generations (Model 1) and opportunity structure (Model 3), i.e., accounting for the fact that there is a decline in the second generation and that the opportunity structure for co-national immigrant partners within Germany has been increasing. Trends in educational attainment do not impact the trends in marriage choice (Model 3).

The corresponding trends with respect to bi-national marriage are included in Table 3 just for information. As they are not at the focus of our interest, we do not discuss them here any further.

5. Summary and discussion

In this paper, we made use of pooled cross-sectional data from the German Microcensus to study transnational marriage among former labour migrants and their descendants in Germany. While available empirical evidence is, with rare exceptions, rather crude and anecdotic, the huge sample size enabled us to contribute to explaining this important phenomenon with empirical findings that are unique in their scope and their degree of differentiation. Our analyses were guided by four basic expectations, which were anchored in a more general theoretical framework of immigrants' marriage behaviour. Summarizing our results, we want to briefly refer to each of these points in the following, highlighting the relevancy of central findings and indicating some implications for future research.

We could confirm, first, the more or less well-known fact of notable differences between ethnic groups. Not surprisingly, among all five labour migrant groups under consideration, marrying a partner residing in the country of origin is most common among Turks. Transnational marriage choice is also of notable importance among ex-Yugoslavs. It plays only a negligible role, however, among Italians, Spaniards, and Greeks. As outlined in Section 2.2, it would make some sense to attribute these group differences to religion and to legal restrictions on immigration. Within the possibilities given by our data, we can deliver only indirect evidence for this point of view; it is supported insofar as variables related to rivaling explanations, like different opportunity structures or lower structural integration, can not reduce the group differences significantly in multivariate analyses. We consider it a crucial task for future research to test more directly whether religion-based cultural orientations and motivational aspects related to legal immigration restrictions indeed matter, and in how far they are already sufficient explanations. Next to group differences, we also found a notable difference between genders among all groups. Marrying a co-ethnic partner from abroad is by far more common among male immigrants than among female immigrants. This tends to hold even controlling for gender-specific opportunity structures; this gender gap is hard to explain straightforwardly by the standard approaches, and requires further theoretical elaboration.

Our second focus was on trends of transnational marriage over generations and time (in terms of marriage cohorts). A basic assimilationist perspective would expect declining tendencies, which is in line with the more general framework sketched in Section 2.1. We found that by and large there is a lot of support for this expectation; but the picture needs some important differentiations. Both trends over generations and trends over cohorts are quite visible among immigrant men. Here, only ex-Yugoslavs play an exceptional role. In the case of immigrant women the picture is less clear. Let us disregard Italians, Greeks, and Spaniards for a moment, because their general level of transnational marriage is very low anyway. Among Turkish and ex-Yugoslav women in Germany we find a significant increase over the marriage cohorts. And only when we take this general increase into account does a slight decline over generations appear. Obviously, this immediately raises

the question of how to explain this general increase. This holds all the more as the increase is not straight linear, but developed in cyclical patterns (see Figure 1b). The assumption that this might be decisively connected to severe changes in the legal conditions for immigration and naturalization during the period under study suggests itself. However, we were not able to adequately test for corresponding period effects within the scope of this paper. This is a further challenging task for future research; within the limits of our analyses we can only state that the general increase is not due to changes in the opportunity structure of the marriage market within Germany.

This leads us to the discussion of our third set of hypotheses. We expected transnational marriage to be partly driven by the opportunity structure, i.e., by the supply of potential co-ethnic spouses in the country of residence. Again, we found only partial support according to gender. Among women, the two variables chosen, group size and sex ratio, show the expected negative sign: This means that the larger the pool of potential partners from one's own national group and of opposite sex residing in Germany, the lower is the likelihood to import a husband from one's country of origin. Among men, the structural features do not seem to be important for the formation of transnational marriages; they only affect the propensity toward intermarriage. It is worth noting that the actual opportunity structure is only roughly captured by the two macro variables used in our analyses. It would certainly be desirable to have a more precise measure of the individual opportunity sets in future research; this includes, among others, more-finely grained information on the daily social foci, as well as information on the transnational social networks of immigrants residing in Germany.

Finally, our fourth focus was the role of structural assimilation. We expected the degree of educational attainment to be negatively linked to the propensity to import a spouse from one's own country of origin. But the data did not support this hypothesis, neither for men nor for women. So we could not replicate the finding of González-Ferrer (2006) that at least among men, the practice of importing spouses is clearly related to low levels of education (González-Ferrer 2006: 10). Nor could we find the contrary either, i.e., positive effects of higher education on transnational marriage, such as those Lievens (1999) observed among Turkish women in Belgium. The absence of any negative correlation between transnational marriage and structural assimilation is perhaps the most striking puzzle after the analyses. It further emphasizes the need for more direct tests of rivaling explanations as already discussed under the first point. Whatever the factor that counteracts the assumed negative impact of education on the propensity toward a transnational partner choice, it has severe consequences for the whole process of intergenerational integration: As spouses from the country of origin possess little social or cultural capital specific to the receiving country (e.g., proficiency in the German language, knowledge of the German educational system), this will decelerate the structural integration of the succeeding generation; it is reasonable to assume that this holds especially in the case of wives coming from abroad, as they are primarily concerned with the upbringing and social education of the offspring.

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Appendix:*Table 4a:* Descriptive statistics of dependent and independent variables for men by nationality and generation (means or percentages in columns)

	Italian			Spanish			Greek			Turkish			ex- Yugoslav		
	1 st gen.	1.5 gen.	2 nd gen.	1 st gen.	1.5 gen.	2 nd gen.	1 st gen.	1.5 gen.	2 nd gen.	1 st gen.	1.5 gen.	2 nd gen.	1 st gen.	1.5 gen.	2 nd gen.
<i>Type of marriage</i>															
Transnational marriage	21.6	16.5	5.4	22.9	10.4	3.7	21.1	21.6	10.7	49.6	55.4	39.8	31.2	32.2	24.6
Marriage to a co-national	31.0	42.8	39.2	40.3	46.0	34.0	53.6	60.9	56.0	37.4	39.0	50.1	47.6	41.0	44.7
Marriage to a German	47.4	40.7	55.4	36.8	43.7	62.3	25.3	17.5	33.3	13.0	5.7	10.1	21.2	26.8	30.7
<i>Age at marriage</i>															
Mean	30.4	24.8	25.6	32.0	24.5	25.8	32.7	24.7	25.1	32.9	22.0	22.0	33.1	24.3	24.8
<i>Year of marriage</i>															
Mean: 19..	77	80	86	75	79	87	77	83	89	82	86	91	81	87	91
<i>Relative group size</i>															
Mean	1.06	0.93	0.91	0.51	0.25	0.21	0.64	0.36	0.43	1.11	2.04	3.01	1.28	0.79	1.10
<i>Relative sex ratio</i>															
Mean	0.32	0.47	0.62	0.48	0.74	1.05	0.74	1.01	0.93	0.95	1.13	1.12	1.20	1.11	1.19
<i>Educational attainment</i>															
Not applicable & no education	10.3	10.6	6.1	11.4	3.2	3.6	7.5	5.0	5.7	16.1	12.9	7.6	6.1	6.3	6.2
1b (general elementary edu- cation)	42.3	47.0	24.6	41.8	32.1	12.6	43.6	41.9	22.1	36.9	43.5	29.5	25.6	25.3	16.1
1c (basic vocational training)	34.3	32.7	50.9	30.4	47.4	55.9	21.2	38.5	36.4	23.2	32.7	41.3	46.4	55.3	43.7
2b (intermediate general)	3.0	2.6	0.8	2.0	2.0	3.5	4.0	1.6	4.1	3.7	2.6	2.6	1.8	1.1	1.8
2a (intermediate vocational)	6.6	5.2	11.7	5.6	9.3	14.0	6.2	8.4	17.4	6.4	4.9	10.8	10.6	7.5	20.8
2c_gen (general maturity)	0.4	0.3	0.4	1.0	0.6	1.3	4.1	1.4	2.1	3.1	0.6	1.2	1.2	1.2	1.4
2c_voc (vocational maturity)	1.3	0.4	2.5	3.3	2.8	2.4	5.1	1.4	6.0	3.9	0.9	2.1	4.4	1.6	3.9
3a (lower tertiary)	0.8	0.4	1.3	1.3	0.8	3.3	2.4	0.6	3.1	1.9	0.6	0.7	1.5	0.5	1.0
3b (higher tertiary)	0.8	0.4	0.9	2.8	1.1	1.5	5.3	0.6	2.0	3.7	0.2	0.8	2.3	–	1.3
Still in school	0.3	0.3	0.9	0.5	0.8	2.0	0.7	0.7	1.0	1.1	1.1	3.4	0.3	1.3	3.7
Total	1,433	672	298	222	110	79	454	248	134	1,190	2,111	894	1,025	235	134

Source: Microcensus Scientific Use Files 1976-2004 (19 files)

Table 4b: Descriptive statistics of dependent and independent variables for women by nationality and generation (means or percentages in columns)

	Italian			Spanish			Greek			Turkish			ex-Yugoslav		
	1 st gen.	1.5 gen.	2 nd gen.	1 st gen.	1.5 gen.	2 nd gen.	1 st gen.	1.5 gen.	2 nd gen.	1 st gen.	1.5 gen.	2 nd gen.	1 st gen.	1.5 gen.	2 nd gen.
<i>Type of marriage</i>															
Transnational marriage	1.8	2.7	3.3	0.8	1.5	0.4	2.4	13.1	8.9	25.3	36.4	29.5	5.7	15.5	18.9
Marriage to a co-national	70.8	82.8	67.9	65.4	65.1	45.5	73.3	73.4	74.7	61.6	60.9	65.0	60.6	58.7	54.4
Marriage to a German	27.5	14.5	28.8	33.9	33.4	54.1	24.3	13.6	16.4	13.1	2.7	5.6	33.7	25.7	26.7
<i>Age at marriage</i>															
Mean	31.3	21.4	22.3	30.3	22.0	22.5	31.7	20.4	21.4	31.2	20.8	20.0	32.0	22.4	22.4
<i>Year of marriage</i>															
Mean: 19..	80	79	86	76	78	85	77	79	88	82	85	90	81	85	90
<i>Relative group size</i>															
Mean	0.97	0.95	0.88	0.53	0.28	0.22	0.58	0.38	0.43	0.96	1.66	2.59	1.33	0.78	1.02
<i>Relative sex ratio</i>															
Mean	3.93	2.62	2.49	2.77	1.84	1.20	1.51	1.18	1.11	1.19	0.93	0.90	0.86	1.00	0.88
<i>Educational attainment</i>															
Not applicable & no education	11.6	13.5	6.8	8.3	4.0	3.0	10.3	8.7	6.5	23.5	17.9	12.2	8.6	6.9	7.5
1b (general elementary education)	50.1	60.8	33.8	55.5	49.2	18.3	55.0	55.3	28.4	45.2	54.5	45.5	46.9	38.0	20.5
1c (basic vocational training)	20.5	18.2	31.4	20.1	25.6	40.2	12.9	20.5	23.7	14.4	17.2	19.5	25.8	34.3	32.4
2b (intermediate general)	4.7	2.6	3.6	1.3	6.4	6.5	4.2	4.4	6.8	5.3	3.3	5.6	3.2	4.8	3.6
2a (intermediate vocational)	5.4	3.1	18.2	5.0	9.4	22.6	2.7	6.3	15.0	4.0	4.3	9.3	8.3	11.2	23.4
2c_gen (general maturity)	2.1	0.4	1.0	2.5	0.7	2.0	3.1	1.8	4.7	1.5	0.6	1.4	1.6	0.8	1.1
2c_voc (vocational maturity)	2.6	0.4	2.9	2.5	3.0	3.7	3.9	1.0	8.4	1.7	0.5	1.4	2.7	2.1	5.9
3a (lower tertiary)	0.8	0.3	0.7	0.8	0.3	0.6	0.7	0.4	1.4	0.6	0.1	0.4	0.8	0.1	1.1
3b (higher tertiary)	1.6	0.4	1.1	2.2	0.3	1.8	6.2	0.1	2.0	2.8	0.3	0.5	1.7	0.5	0.9
Still in school	0.7	0.4	0.5	1.8	1.1	1.2	1.1	1.5	3.1	1.1	1.4	4.3	0.4	1.5	3.7
Total	184	487	392	89	90	82	144	226	196	346	1,405	978	562	267	186

Source: Microcensus Scientific Use Files 1976-2004 (19 files)

Raya Muttarak

Explaining trends and patterns of immigrants' partner choice in Britain

Wie sind die Trends und Verhaltensmuster der Partnerwahl von Immigrant(inn)en in Großbritannien zu erklären?

Abstract:

Based on the 1988–2006 General Household Survey (N=121,934), this paper investigates trends and patterns of partnership formation of immigrants in Britain and explains underlying factors influencing partner choice. The key questions are: 1) whom do the immigrants of different gender, generation and ethnic groups form partnerships with: (a White British partner, a British-born coethnic partner or a coethnic partner from overseas); and 2) what factors are explaining such a choice. Immigrants socialised in Britain, the second generation and those who migrated to Britain at a young age, are more likely to have a White British partner and less likely to be in a transnational partnership. Age at union, marital status, educational qualification, area ethnic composition, sex ratio and educational homogamy are significant predictors of one's partner choice. Yet, ethnic origin remains a crucial determinant of patterns of partnership formation. The statistical analysis suggests that the rates of interethnic union with a White British partner will continue to increase for Black Caribbean, Black Africans and also gradually for highly educated Indians. The proportion of Pakistanis and Bangladeshis having a White British partner will remain low and simultaneously transnational marriage with a coethnic partner from overseas will still be commonly practiced. Overall, interethnic partnerships between the White British population and the population with an immigrant background are increasing in Britain.

Zusammenfassung:

Auf Basis des *General Household Survey* der Jahre 1988 bis 2006 (N=121.934) werden in diesem Beitrag Trends und Verhaltensmuster der Partnerschaftsanbahnung von Immigrant(inn)en in Großbritannien untersucht, sowie diesen zugrundeliegende Faktoren, die die Partnerwahl beeinflussen, erklärt. Folgende Fragestellungen sind dabei ausschlaggebend: 1. Gehen Immigrant(inn)en aus beiden Geschlechtern, aus verschiedenen Generationen und unterschiedenen ethnischen Gruppen eine Partnerschaft ein mit a) einer/einem weißen Britin/Briten, b) einer/einem Angehörigen der gleichen Ethnie, die/der in Großbritannien geboren ist oder c) einer/einem im Ausland geborenen Angehörigen der gleichen Ethnie? Und 2) Welche Faktoren tragen dazu bei, diese Auswahl zu erklären? Für Immigrant(inn)en, die in Großbritannien sozialisiert wurden – d.h. diejenigen, die zur zweiten Generation gehören oder in sehr jungen Jahren eingewandert sind – ist es wahrscheinlicher, eine(n) weiße(n) britische(n) Partner(in) zu haben. Zugleich ist es für diese weniger wahrscheinlich, sich in einer transnationalen Partnerschaft zu befinden. Das Heiratsalter, der Zivilstand, die Bildungsqualifikationen, die ethnische Zusammensetzung des Wohngebietes, die Geschlechterratio und Bildungshomogamie sind signifikante Prädiktoren der Partnerwahl. Dennoch bleibt die ethnische Herkunft eine wichtige Determinante der Verhaltensmuster beim Entstehen von Partnerschaften. Die statistischen Analysen lassen darauf schließen, dass die Anteile interethnischer Partnerschaften mit einer/einem weißen Britin/Briten für Schwarze aus

der Karibik und Afrika stetig und allmählich auch für höher gebildete Inder ansteigen werden. Die Anteile der Pakistanis und Bangladeschis mit einem weißen britischen Partner wird gering bleiben, zugleich werden transnationale Hochzeiten mit einem Partner aus Übersee, der der gleichen Ethnie angehört, gängige Praxis bleiben. Insgesamt nehmen in Großbritannien interethnische Partnerschaften zwischen der weißen britischen Bevölkerungsgruppe und denjenigen mit einem Migrationshintergrund zu.

Key words: intermarriage, transnational marriage, integration, ethnic minority, Britain

Schlagwörter: interethnische Ehen, transnationale Ehen, Integration, ethnische Minderheit, Großbritannien

1. Introduction

Britain is one of the countries in Europe with the longest history of immigration and the largest share of immigrant population. The recent 2001 Census reports that the ethnic minority population accounts for around 8 percent (4.6 million) of the entire British population (ONS 2004). The major minority ethnic groups in Britain comprise immigrants from the New Commonwealth countries whose mass migration started during the 1950s-1960s (Peach 1996). These ethnic groups include Indians, Pakistanis, Black Caribbeans and Black Africans. The immigration of Bangladeshi and Chinese peaked more recently around the 1980s. Most immigrants settled down and formed a family in Britain, resulting in a significant increase in a British-born population with an immigrant background.

Subsequently, the issue of immigrants' integration has become a central debate in Britain. Extant empirical studies usually focus on institutional access and socioeconomic success as an indicator of integration (Nazroo 2003; Heath/McMahon 2005; Heath/Cheung 2007; Rothon et al. 2009). These studies commonly find significant ethnic differentials in key outcomes such as education, employment, health and housing. Although socioeconomic attainment is an important dimension of immigrants' integration, it does not provide much insight into the relations between the majority population and immigrant populations. With almost one-tenth of the population belonging to minority ethnic groups, one key question frequently asked is to whom does the immigrant population marry. An interethnic partnership between immigrant and majority population has commonly been used as an indicator of integration since it implies a decline in group boundaries (Hwang et al. 1997; Qian/Lichter 2001; Rosenfeld 2002). Thus the study of immigrants' partner choice could indicate the degree to which members from a minority ethnic group are integrated into the host society.

This paper aims to provide understanding of immigrants' partner choice in contemporary Britain. The paper focuses on two main questions: 1) to whom the immigrants of different gender, generation and ethnic groups marry: (a White British partner, a British-born coethnic partner or a coethnic partner from overseas); and 2) what are the underlying factors that explain such a choice. The data analysis is based on the pooled 1988–2006 General

Household Survey with a sample of 60,967 couples. The empirical study includes an investigation of trends and patterns of partnerships of different immigrant groups and the roles of individual and macro-level factors in shaping one's partner choice. The study also attempts to explain ethnic differentials in partnership patterns after taking account of relevant factors.

In this paper, the terms intermarriage and interethnic union are used inter-changeably and both refer to a union (both legal marriage and cohabitation) between members of minority ethnic groups and majority populations, i.e. White British in this study. Transnational marriage refers to a partnership between coethnic members, one born in or migrated to Britain before the age of 16 and one born abroad and migrated to Britain at the age of 16 or over.

The paper is organised as follows. Section 2 provides a review of literature on interethnic unions and transnational marriage in Britain. Section 3 describes the data used and Section 4 discusses methods of analysis and measures of an outcome variable and co-variables. Section 5 presents empirical results from descriptive analysis and Section 6 presents estimates from multivariate models. Section 7 summarises and discusses the findings.

2. Review of literature on intermarriage and transnational marriage in Britain

2.1 Literature on intermarriage

There are relatively fewer empirical studies of interethnic unions in Britain in comparison to those that focus on the classical immigration countries such as the United States (Pagnini/Morgan 1990; Kalmijn 1993; Qian/Lichter 2001, 2007), Australia (Gray 1987; Jones/Luijckx 1996; Giorgas/Jones 2002) and Canada (Kalbach 1991, 2002; Tzeng 2000).

Extant empirical studies on interethnic unions in Britain are mostly descriptive. Bagley (1972a, 1972b) published one of the earliest descriptive statistics on the rate of interethnic marriage in Britain using the 1969 Registrar General's Quarterly Returns for England and Wales. However, the findings are open to bias because ethnic origin was inferred from an individual's country of origin. For example, any individuals born in Britain were classified as 'British', so coethnic unions between first and second generation ethnic minority individuals were wrongly classified as interethnic.

A direct question on ethnic identification was first introduced in the Labour Force Survey (LFS) in 1979 and in the Census in 1991. Before the release of the 1991 Census, the LFS had been used as a key data source for the study of interethnic unions in Britain because of its large sample size and the availability of information on ethnic group and birthplace (Jones 1982, 1984; Coleman 1985, 1992, 1994; Berrington 1994). The consistent findings from the research using the LFS data between 1979 and 1991 were: 1) Black Caribbeans and Black Africans have much higher rates of intermarriage than Indians, Pakistanis and Bangladeshis; 2) Interethnic unions are more common among younger generations born in Britain; 3) The rate of intermarriage is higher for men than for women across all ethnic groups except for the Chinese and; 4) Individuals with mixed ethnic origin have the highest rate of intermarriage.

The analysis of the 1991 Census by Berrington (1996) yields similar findings to the LFS data. The key difference from the previous literature is the distinction between legal mar-

riages and cohabiting unions and the inclusion of socioeconomic characteristics in the analysis. Interethnic partnerships are found to be more common in cohabiting unions and among individuals from privileged socioeconomic status. Still, Berrington's study does not take into account the possible association between each socioeconomic factor and the influence of macro-structural factors such as opportunities for intergroup contacts on marital choice.

Although the LFS and the Census are useful data sources to analyse the trends and patterns of intermarriage, the drawback is the lack of information on the date of marriage. If the study of intermarriage primarily focuses on the unions formed in Britain, ideally marriages contracted overseas should be excluded from the analysis. The previous findings could be biased since there is no way of knowing when and where the marriages took place. Furthermore, if there is a selection into interethnic relationship, it is important to take into account the distribution of demographic and socioeconomic characteristics of each ethnic group. This study addresses these two issues by restricting the study sample to the unions contracted in Britain and by employing multivariate analyses to investigate the influence of individual and macro-level factors in determining interethnic partnership.

2.2 Literature on transnational marriage

Transnational marriage is of importance in understanding immigrants' partner choices because this practice is fairly common amongst certain ethnic groups in Britain, particularly those from the Indian subcontinent. Traditional partnership selection such as arranged marriage or close cousin marriage remains prevalent even amongst the British-born population. Weddings typically take place in the country of origin following which a non-British spouse applies for permission to enter Britain for the purposes of 'family reunion'. In Britain, transnational marriage of this kind is common amongst Pakistanis, Bangladeshis and Indians and to a lesser extent African Asians (Modood 1997). Literature related to transnational marriage is predominantly anthropological or qualitative (Pocok 1972; Ballard 1990; Anwar 1998; Bhopal 1999). Yet, these studies are useful in understanding preference in partner choice and could help explain why certain ethnic groups prefer transnational marriage to interethnic partnership or coethnic partnership in a host country.

The practices of transnational marriage vary between ethnic, religious and linguistic groups according to different kinship structures and marriage rules. For instance, endogamy or close kin marriage is a preference amongst Mirpuri Pakistanis but consanguinity of this kind is prohibited among Sikh and Hindu Indians (Ballard 1996; Shaw 2001). Despite the diversity in marriage practices, one common feature is that the marriage is arranged whereby partner choice is predominantly made by parents or senior members of the family.

Beck-Gernsheim (2007) provides a useful summary of incentives for immigrants and their British-born children to seek partners from their country of origin. First, transnational marriage help sustain ties with kin in the country of origin. For migrants from a society where arranged marriage is common, they naturally receive offers from their relatives to help in finding a potential partner for their sons and daughters. Loyalty, obligation to kin and the importance of keeping family honour make it difficult to decline such requests (Ballard 1990; Shaw 2001). The arrangement of transnational marriage thus helps strengthen their relationship with kin and secures their social position in their country of origin.

Second, immigrants can benefit from upward mobility acquired through transnational marriage. Living in a host country with a permanent resident status or citizenship enhances immigrants' social status in the country of origin. Despite having a rural background or low education, immigrants become an attractive marriage partner for those with higher social status in their country of origin. Transnational marriage thus could provide opportunities for social mobility in the country of origin.

Third, transnational marriage brings about changes in gender relations. For immigrant men of some ethnic groups, having lost their traditional patriarchal power in Western societies, marrying a woman from their country of origin could see a return of their authority (Shaw 2001; Shaw/Charsley 2006). Likewise, for immigrant women, marrying an imported husband not only means that they are able to avoid in-law pressure but they also gain in the balance of power in the family because the women have the advantage in language ability and understanding of the host country while their imported husbands do not.

Extant literature on transnational marriage provides an understanding of ethno-cultural preference in partner choice. The first quantitative study of transnational marriage amongst Indian, Pakistani and Bangladeshi residents in Britain by Dale (2008) finds that there are both ethnic and educational variations amongst those in transnational marriage i.e. the rates of transnational marriage are higher amongst those without a degree qualification and amongst Pakistani and Bangladeshi men and women compared to Indians. It is clear that transnational marriage remains a common practice amongst several ethnic groups in Britain. However, lacking information on date of marriage or cohabitation, Dale's study fails to exclude partnerships formed outside Britain and this could bias the estimate of transnational marriage. This paper attempts to deal with this issue and extends beyond the previous study by considering plausible influences of other characteristics, such as generation, parents' country of birth and ethnic composition, on the likelihood of marrying a spouse from overseas. The paper also examines the transnational marriage pattern of other ethnic groups besides the Indian, Pakistani and Bangladeshi, while extant literature focuses predominantly on these three groups.

3. Data

The empirical analysis is based on the General Household Survey (GHS) which is a continuous national survey conducted on an annual basis since 1971. Each year the GHS covers approximately 9,000 households and about 16,000 adults aged 16 and over in England, Wales and Scotland. The individual questionnaire covers detailed information on demographic characteristics, educational history, family history and the de facto marital status of each individual including relationships to other members in a household. This enables us to identify (a) couple(s) in a household and retain information on both the individual respondent and spouse. In this study, the data from the years 1988–2006 are merged¹ in order to gain a sufficient number of ethnic minorities to perform statistical analysis and investigate the trends of intermarriage over time.

1 This includes continuous data for each year, except for the year 1997-1998 when the survey was reviewed and 1999-2000 when the survey was redeveloped.

The main advantage of the GHS is the availability of the information on dates of marriage and cohabitation and year of arrival into Britain. This enables us to exclude from the sample partnerships contracted overseas, while previous studies of interethnic and transnational unions in Britain did not enable this. Partnerships formed overseas are embedded in a different demographic and socioeconomic context from partnerships formed in Britain. The sample selected for this study is therefore restricted to partnerships that were contracted in Britain in order to avoid this bias. The analysis is also further limited to immigrants or their partners who had resided in Britain for at least five years. This allows us to ensure that partnership formation is influenced by observed characteristics in the survey and not by other influences from abroad.

The ethnic categories are derived from a self-identification ethnic question in the GHS. The ethnic classification in the GHS is not consistent and has changed over time so the guidelines of the Economic and Social Data Service (ESDS) are followed in order to derive a consistent ethnicity variable². In this study, ethnic groups are classified into ten categories: White British, White Other, Black Caribbean, Black African, Indian, Pakistani, Bangladeshi, Chinese, mixed and other ethnic group. Since the GHS asks detailed questions on marriage and family only for respondents age between 16–59 years of age, this study is restricted to the sample of respondents in this age group. This leads to the sample of 121,934 individuals of whom 5,283 are from minority ethnic groups.

The main drawback of using the GHS for the study of interethnic unions is that all diversities within and between ethnic groups cannot be captured beyond the main ethnic categories available in the data. There is no information on religion, which is one key factor determining intermarriage patterns. Generally, there is an endogeneity issue in investigating the effect of religion on intermarriage because it is not possible to identify whether an individual converts to a religion of a spouse after marriage. This requires large-scale longitudinal data that follows the same individual over time and allows us to identify individuals' characteristics before and after marriage. Unfortunately, such data is not yet available in Britain.

Another problem of the GHS concerns ethnic categorisation, specifically the category 'mixed' ethnicity. Any individuals with mixed parentage are classified into 'mixed' ethnic group. In fact, 'mixed' is not an ethnic group and there is substantial diversity amongst individuals with mixed parentage. However, not until 2001 were respondents provided with four options of mixed-ethnic category e.g. mixed white-Black Caribbean and mixed white-Asian in the GHS. Therefore, in this study, diversity cannot be distinguished within mixed ethnic category, at least not in the surveys that were carried out before 2001.

Despite these disadvantages, the GHS remains a useful data source to study interethnic unions in Britain. Rich information on marriage and family and the continuity of the survey over time allow us to investigate trends and patterns of immigrants' partnership formation in Britain taking account of the distribution of demographic and socioeconomic characteristics of each ethnic group for the first time.

2 The guideline for creating a consistent ethnic variable in the GHS is available from <<http://www.esds.ac.uk/government/dv/ethnicity/GHS/index.asp>>.

4. Methods

This paper aims to explore immigrants' partnership formation patterns focusing on interethnic, coethnic and transnational marriage. An analysis is made of trends and patterns of partnerships across ethnic groups and generations overtime. The effects of underlying individual and macro-level factors in shaping marital choice are also examined. The multivariate models predicting the likelihood of intermarriage and transnational marriage are logistic and multinomial regression. Outcome variable and independent variables are discussed below. Descriptive statistics of dependent and independent variables are presented in Appendix A.

4.1 Dependent variable

The outcome of interest in this paper is immigrants' partner choice, which is divided into four types of union.

- 1) Interethnic union is defined as a partnership between an ethnic minority member with a White British person.
- 2) Coethnic transnational union is defined as a partnership between members of the same ethnic group where one partner was born in Britain or migrated to Britain before the age of 16 and one partner was born abroad and migrated to Britain at the age of 16 or above. The age of 16 is chosen because before 1 January 2005, according to the British immigration rules³, the minimum age at which a British resident could sponsor a partner from overseas to come to Britain for marriage was 16. It is thus assumed that a spouse of the second generation or the 1.5 generation who came to Britain at the age of 16 or over migrated for the purpose of marriage.
- 3) Coethnic union is defined as a partnership between members of the same ethnic group. This refers to a) a coethnic partnership formed in Britain where both partners were born in Britain or migrated to Britain before the age of 16 or b) a coethnic partnership formed overseas where both partners were born outside Britain and migrated to Britain at the age of 16 or above.
- 4) Interethnic union with other ethnic groups is defined as a marriage or cohabitation between an ethnic minority male and female who belong to different ethnic groups.

3 In Britain the minimum age for marriage visa sponsors and applicants was raised from 16 to 18 on 1 January 2005. This was raised to 21 years old on 27 November 2008. In this study, for unions formed before 2005, transnational marriage is defined as a union where one partner arrived in Britain at the age of 16 or over, while for unions formed from 2005 onwards, transnational marriage is defined as a union where one partner arrived in Britain at the age of 18 or over.

4.2 Independent variables

4.2.1 Individual-level characteristics

Generation is divided into four categories. Second generation refers to individuals who were born in Britain; 1.5 generation refers to individuals born outside Britain who are further divided into two groups: a) those who immigrated to Britain at the age of 6 or younger; and b) those immigrated to Britain between the ages of 7 and 12; and first generation refers to respondents who were born outside Britain and immigrated to Britain at age 13 or older.

Age at union: later age at union indicates greater independence on partner selection, maturity and possibly more opportunity to be exposed to different populations (Lievens 1998). The probability of intermarriage is thus expected to rise with age of marriage and vice versa for the likelihood of transnational marriage. Age at union is divided into seven age groups: 18 or less, 19-24, 25-29, 30-34, 35-39, 40-44 and 45 and older.

Year started union: the increasingly favourable attitudes towards intermarriage (Rothon/Heath 2003; Ford 2007) and the increasing size of the ethnic minority population since the 1960s (Peach 1996) are expected to raise opportunities for intergroup contacts and consequently rates of intermarriage. Year started union refers to the year in which the union took place and is divided into six time periods: 1950s, 1960s, 1970s, 1980s, 1990s and 2000s.

Marital status: interethnic union is found to be more common in non-traditional forms of partnerships like cohabitation or remarriage because there is a selection of non-traditional and non-religious individuals in these partnerships (Thornton et al. 1992; Clarkberg et al. 1995). Marital status is divided into four categories: first marriage, cohabiting union never married, cohabiting union (separated/divorced) and remarriage.

*Educational qualification*⁴: is commonly found to have a positive effect on intermarriage (Kalmijn 1998; Lehrer 1998). Yet, having a higher level of education is also found to reduce the chance of intermarriage for some groups (O'Leary/Finnäs 2002). Educational qualification is divided into three categories: no qualification, low and intermediate qualification, and high qualification.

4.2.2 Homogamy

The effects of assortative mating is also examined in terms of age and education on intermarriage and transnational marriage. The literature on ethnic intermarriage has found that educational assortative mating weakens the degree of ethnic barriers in white-ethnic minority unions (Kalmijn 1993; Qian 1997; Qian/Lichter 2007). If this is true, we should expect to find that couples in interethnic unions are likely to be homogenous in terms of

4 Educational qualification is classified into three categories: 1) high qualification includes NVQ Levels 4 and 5 (e.g. higher degree, degree, nursing, teaching and higher qualifications); 2) intermediate and low qualification includes NVQ Levels 1, 2 and 3 (e.g. GCE A-levels, GCSE, foreign qualifications and other qualifications); and 3) no qualifications includes those with no qualification, never went to school and missing information. The definition of each level of educational qualification is available from <<http://www.celsius.lshtm.ac.uk/newDataDict/ddrill2k.php?vname=HLQP0&sqlname=ME01>>.

the level of educational attainment. Alternatively, the status exchange theory implies that in interethnic unions, immigrants are more likely to marry downwards while members of the majority population are more likely to marry upwards as an exchange between socio-economic status and racial/ethnic status (Merton 1941). If this theory holds true, we should expect to find intermarried immigrants having a higher level of educational attainment than their White British partners.

Educational homogamy is divided into three categories: male partner has a higher level of education, male and female partners have the same level of education and male partner has a lower level of education.

Age homogamy is divided into three categories: male partner is older, male and female partners have the same age and male partner is younger.

4.2.3 Macro-level variables

White-coethnic ratio: The social structure theory suggests that the chance for a member of a minority group to form an interethnic partnership depends upon the number of coethnic members as well as the degree to which the ethnic group is segregated geographically from the majority population (Blau 1977; Peach 1980; Blau/Blum/ Schwartz 1982). Area ethnic composition is measured as:

$$\text{White-coethnic ratio}_{ic}^e = \frac{n_c^w}{n_c^e}$$

where the White-coethnic ratio of individual i from ethnic group e equals the ratio of the number of whites w in region c to the number of members from ethnic group e in region c . The log of group size is taken in order to reduce the degree of skewness. We calculate the relative population size of an ethnic group at the government office region level⁵ rather than the national one because ethnic heterogeneity which influences the chance to encounter members of other ethnic groups is more substantial in a small geographical unit.

Sex ratio: This is a crucial factor in the heterosexual marriage market. For example, if men outnumber women in a particular ethnic group, the skewed sex ratio will drive men to seek eligible partners outside their own ethnic group or not marry at all. Sex ratio is measured at the regional level rather than the national level since partnerships are more likely to be formed locally. The sex ratio for an individual i is defined as:

$$\text{Sex ratio}_{iec}^f = \frac{n_{ec}^m}{n_{ec}^f}$$

where n_{ec}^m and n_{ec}^f are the number of males and females, respectively, from ethnic group e living in region c . A sex ratio greater than 1 indicates that the number of men from ethnic group e living in region c exceeds that of women from ethnic group e living in region c . This could promote out-group marriage for men and in-group marriage for women. The log transformation of sex ratio is used to reduce skewness.

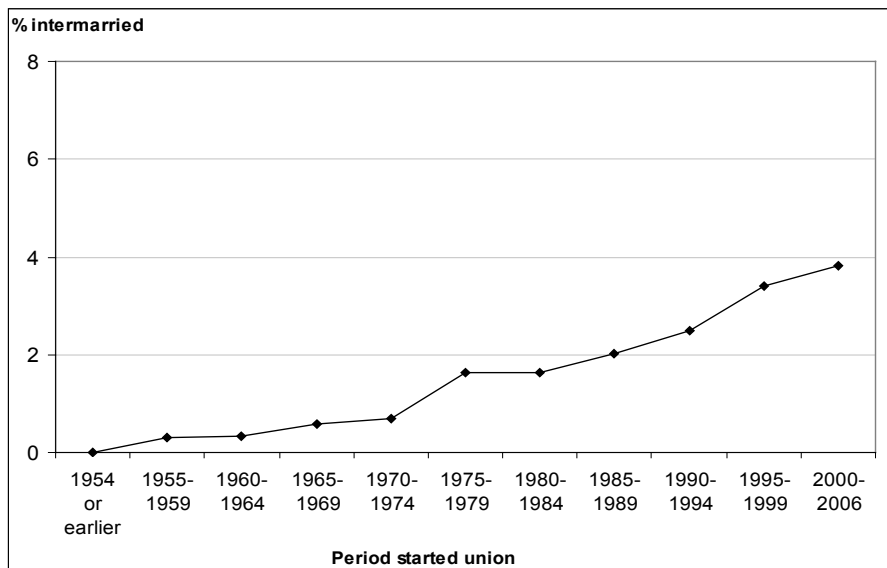
5 Ideally, we would like to use a more detailed geographical variable such as a ward or county level. Yet, government office region is the most detailed geographical information available in the GHS.

5. Descriptive results

The trend of interethnic unions between White British and ethnic minority members over the periods when partnerships were formed is illustrated in Figure 1. The distribution of types of union by ethnic groups and generation for men and women are further examined in Tables 1 and 2 respectively.

Figure 1 suggests that interethnic unions between White British and members of minority ethnic groups are increasing. It is evident that the proportion of White British ethnic minority unions rises in a linear trend with the periods the partnerships were formed. The more recent the periods are during which the partnerships started, the more likely it is that the partnerships are interethnic ones. Trends of interethnic unions across birth cohorts are also examined (results available upon request) and a similar picture is found, that is those born in recent cohorts are also more likely to be in interethnic unions compared to those born in earlier periods. The increase in interethnic partnerships in recent marriage/cohabitation cohorts and birth cohorts could be due to the general change in more favourable attitudes towards interethnic partnerships together with the increasing numbers of the ethnic minority population, especially the second generation in Britain.

Figure 1: Percentage of interethnic unions between White British and ethnic minority members by period a union was formed



Source: General Household Survey 1988–2006

Next, partnership patterns by gender, ethnicity and generation are investigated as illustrated in Tables 1 and 2.

Interethnic unions with White British. For White British, those born outside Britain (first generation) seem to have higher rates of interethnic unions than those born in Brit-

ain. The rates of interethnic unions for White British men and women are not significantly different from one another. As for minority ethnic groups, generally men have higher rates of interethnic union than women except for Chinese, mixed and other ethnic groups.

Table 1: Percentage distribution of types of unions by ethnic groups and generation (Male)

	Interethnic with White British ¹	Coethnic in Britain/ Abroad ²	Coethnic transnational	Interethnic with other ethnic groups ³	Row percentages N
First generation⁴	11,1	65,2	17,1	6,6	1.418
White British	4,3	25,7	62,9	7,1	70
Indian	4,2	71,7	19,4	4,6	520
Pakistani	3,8	71,4	21,1	3,8	185
Bangladeshi	1,4	75,7	21,4	1,4	70
Black Caribbean	23,4	57,3	12,9	6,5	124
Black African	8,8	62,6	17,7	10,9	147
Chinese	7,1	70,6	17,7	4,7	85
Mixed	33,3	37,5	8,3	20,8	48
Other	26,8	52,3	10,9	10,0	239
1.5 generation⁴	17,1	35,4	42,0	5,6	503
White British	1,0	95,2	1,0	2,9	315
Indian	13,9	43,1	41,7	1,4	223
Pakistani	6,3	21,9	70,8	1,0	96
Bangladeshi	5,7	17,1	71,4	5,7	35
Black Caribbean	33,3	53,0	3,0	10,6	66
Black African	0,0	22,2	11,1	66,7	9
Chinese	15,4	38,5	46,2	0,0	13
Mixed	50,0	12,5	37,5	0,0	8
Other	35,9	22,6	24,5	17,0	53
Second generation⁴	45,1	31,6	15,5	7,8	626
White British	1,0	95,8	0,2	3,0	53.438
Indian	13,4	57,0	24,7	4,9	142
Pakistani	8,8	35,3	50,0	5,9	68
Bangladeshi	0,0	66,7	33,3	0,0	3
Black Caribbean	55,8	29,9	4,1	10,2	147
Black African	29,0	29,0	35,5	6,5	31
Chinese	16,7	16,7	33,3	33,3	6
Mixed	82,9	6,6	2,6	7,9	76
Other	66,7	20,9	3,9	8,5	153

Note:

- 1) For White British, 'Interethnic with White British' refers to an interethnic union with partners from minority ethnic groups (excluding White Other).
- 2) For the first generation, the column 'Coethnic in Britain/Abroad' refers exclusively to a coethnic union formed abroad, while for the 1.5 and second generation this column refers exclusively to a coethnic union formed in Britain.
- 3) For White British, 'Interethnic with other ethnic groups' refers to an interethnic union with partners from White Other origin.
- 4) This applies only to members of minority ethnic groups. White British is excluded from this row.

Source: General Household Survey 1988 – 2006

Table 2: Percentage distribution of types of unions by ethnic groups and generation (Female)

	<i>Row percentages</i>				
	Interethnic with White British ¹	Coethnic in Britain/Abroad ²	Coethnic transnational	Interethnic with other ethnic groups ³	N
First generation⁴	13,8	62,1	18,3	5,8	1.270
White British	2,9	29,5	67,6	0,0	105
Indian	2,3	71,9	23,4	2,5	445
Pakistani	0,5	60,0	35,7	3,8	185
Bangladeshi	1,6	61,9	33,3	3,2	63
Black Caribbean	14,7	68,6	9,8	6,9	102
Black African	10,7	71,4	8,9	8,9	112
Chinese	31,6	57,9	3,2	7,4	95
Mixed	39,5	37,2	14,0	9,3	43
Other	39,6	43,6	5,3	11,6	225
1.5 generation⁴	15,9	40,4	37,4	6,2	433
White British	1,1	94,8	2,2	1,9	368
Indian	13,2	49,5	34,6	2,8	182
Pakistani	1,7	33,3	63,3	1,7	60
Bangladeshi	0,0	19,1	71,4	9,5	21
Black Caribbean	12,5	54,7	20,3	12,5	64
Black African	7,1	28,6	64,3	0,0	14
Chinese	18,2	27,3	36,4	18,2	22
Mixed	58,3	0,0	25,0	16,7	12
Other	41,4	27,6	22,4	8,6	58
Second generation⁴	32,9	35,9	22,9	8,3	724
White British	1,1	96,5	0,2	2,3	56.727
Indian	10,6	62,7	21,1	5,6	161
Pakistani	4,9	30,1	61,8	3,3	123
Bangladeshi	5,3	26,3	63,2	5,3	19
Black Caribbean	44,1	38,2	9,2	8,6	152
Black African	16,1	32,3	45,2	6,5	31
Chinese	60,0	20,0	20,0	0,0	10
Mixed	75,6	8,5	3,7	12,2	82
Other	50,7	27,4	7,5	14,4	146

Note:

- 1) For White British, 'Interethnic with White British' refers to an interethnic union with partners from minority ethnic groups (excluding White Other).
- 2) For the first generation, the column 'Coethnic in Britain/Abroad' refers exclusively to a coethnic union formed abroad, while for the 1.5 and second generation this column refers exclusively to a coethnic union formed in Britain.
- 3) For White British, 'Interethnic with other ethnic groups' refers to an interethnic union with partners from White Other origin.
- 4) This applies only to members of minority ethnic groups. White British is excluded from this row.

Source: General Household Survey 1988–2006

Unsurprisingly, the association between generation and interethnic partnership is positive, i.e. those born in Britain have the highest rates of interethnic unions followed by those who immigrated to Britain at young age. The first generation has the lowest rates of intermarriage.

There is substantial ethnic diversity in interethnic union patterns. Unsurprisingly, both men and women with mixed ethnic origin have the highest rates of interethnic unions with the White British. Around four-fifths of mixed ethnic individuals born in Britain have White British partners. The rates of interethnic unions with White British partners are also high for those from other ethnic groups. Since other ethnic groups comprise individuals from diverse ethnic groups who do not belong to major ethnic groups, it is rather difficult to interpret the result. Black Caribbean men and Chinese women also have strikingly high rates of interethnic unions with a White British partner, especially for those born in Britain. More than half of second generation Black Caribbean men and Chinese women are married to/cohabiting with a White British partner. The proportion of intermarried Black Africans is lower than that of Black Caribbean but is much higher than that of South Asians. Indians have higher rates of interethnic union with White British than Pakistanis and Bangladeshis but even so the intermarriage rate for the former is well below 15 percent. Less than 10 percent of Pakistanis and Bangladeshis are intermarried. Especially for Pakistani and Bangladeshi women born abroad, almost virtually none of them have a White British spouse.

Coethnic unions. Coethnic union is the most common type of partnership for all ethnic groups apart from individuals with a mixed ethnic origin. For the first generation, the vast majority is married to/cohabiting with a coethnic partner who was also born abroad and arrived in Britain at the age of 13 or above, like themselves. For the 1.5 generation, a preference for transnational partnership is observed in many ethnic groups. Over three-quarters of Pakistani and Bangladeshi 1.5 generation men and women are married to a partner born abroad who arrived in Britain at the age of 16 or above. Transnational partnership is also common among 1.5 generation Indian and Chinese men and women and Black African women. On the other hand, more than half of 1.5 generation Black Caribbeans are in a coethnic partnership formed in Britain. Besides, one-third of Black Caribbean men from the 1.5 generation have a White British partner. This shows that Black Caribbeans tend to choose a partner found locally as opposed to importing a spouse from overseas.

For the second generation, the rates of coethnic transnational partnership remain high for Pakistanis and Bangladeshis, especially for women. Around two-thirds of British-born Pakistani and Bangladeshi women are married to a coethnic spouse from overseas who entered Britain at age 16 or above. On the other hand, the majority of British-born Indian men and women form a partnership with a coethnic partner who was either born in Britain like themselves or migrated to Britain at a young age. The proportion of second generation Chinese and Black African in a coethnic transnational partnership is rather high although the sample of British-born Chinese is fairly small and therefore needs to be interpreted with caution. The majority of second generation Black Caribbean men and women, on the other hand, are intermarried with a White British partner. If second generation Black Caribbean men and women are in a coethnic partnership, it is more likely to be with a partner who was also born in Britain.

Interethnic unions with other ethnic groups. There is not much variation between generations and gender in the rates of interethnic union with other ethnic groups. Generally, for most ethnic groups the rates of interethnic union with a White British partner is higher than the rates of interethnic union with a partner from other ethnic groups. How-

ever, for Indians, Pakistanis and Bangladeshis, particularly the first generation, the rates of interethnic union with other ethnic groups is higher than that with White British. When examining the ethnic origins of a partner of those in interethnic unions (see Appendix B), it appears that a partner is likely to come from an ethnic group with a fairly similar cultural background. For instance, an interethnic union amongst South Asians (Indians, Pakistanis and Bangladeshis) and an interethnic union amongst blacks (Black Caribbean and Black Africans) are more common than the union across these cultural groups.

The descriptive results suggest that interethnic unions between White British and members of minority ethnic groups are rising in Britain as can be seen from the higher rates of intermarriage in recent marriage/cohabiting cohorts and birth cohorts along with the growing number of minority ethnic population born in Britain. Meanwhile, there are substantial ethnic and gender differences in partner choice. Interethnic unions with a White British partner are more common amongst ethnic minority men than women whereas coethnic transnational partnerships are more frequent amongst ethnic minority women than men. South Asians have the lowest rates of interethnic union with White British and this corresponds with their highest rates of coethnic transnational partnerships. Those with mixed ethnic origins unsurprisingly have the highest rates of interethnic partnerships with a White British partner followed by Black Caribbean men and Chinese women.

This finding nevertheless might not hold true if we take into account other attributes. For example, Chinese women have high rates of intermarriage possibly because they also tend to have a high level of educational attainment. Subsequently, in the next section, multivariate analysis is employed to examine what factors contribute to different patterns of marital choice and also to investigate whether ethnic and gender differentials in partnership patterns remain after controlling for demographic, socioeconomic and macro-level characteristics.

6. Multivariate results

6.1 Probability of being in interethnic unions with White British

Tables 3 presents the results from logistic regression estimates predicting the likelihood of interethnic unions with White British for ethnic minority men and women. Generally, the effects of generation, age at union, marital status, educational qualification and macro-level characteristics on the propensity for having a White British partner appear in a similar direction for both men and women. While immigrants born abroad who arrived in Britain before the age of 7 have a similar propensity to intermarry to the second generation, their counterparts who arrived in Britain at the age of 7 or older are significantly less likely to have a White British partner. Ethnic minority men and women who started their current union at an older age are significantly more likely to be in an interethnic union with a White British partner. It can be explained that those who formed a partnership at a young age are less independent and are subject to family influence in partner choice which tends to be a preference for a coethnic partner.

Table 3: Logistic regression estimates of probability of interethnic union with a White British partner for ethnic minority men and women

	<i>Men</i>		<i>Women</i>	
	<i>B</i>	<i>S.E.</i>	<i>B</i>	<i>S.E.</i>
<i>Ethnic group</i>				
Indian (reference)				
Pakistani	-0,66	0,29	-1,24	0,41
Bangladeshi	-1,65	0,63	-1,96	0,77
Black Caribbean	1,45	0,22	0,76	0,25
Black African	0,30	0,33	-0,33	0,37
Chinese	-0,47	0,41	0,80	0,31
Mixed	2,10	0,30	2,08	0,31
Other ethnic	1,98	0,19	2,21	0,21
<i>Generation</i>				
Second generation (reference)				
1.5 arrived at age 6 or before	-0,04	0,24	0,07	0,26
1.5 arrived between age 7 - 12	-1,14	0,24	-1,20	0,29
First generation	-1,45	0,17	-0,85	0,18
<i>Age at union</i>				
18 or less (reference)				
19-24	0,57	0,49	0,56	0,36
25-29	0,64	0,50	1,15	0,38
30-34	<i>0,94</i>	0,51	1,53	0,41
35-39	1,13	0,54	1,51	0,47
40-44	0,80	0,61	1,71	0,56
45 or over	0,86	0,69	1,91	0,64
<i>Period started union</i>				
1950s (reference)				
1960s	0,23	0,75	-0,59	0,77
1970s	0,95	0,71	0,29	0,72
1980s	0,50	0,72	0,31	0,72
1990s	0,41	0,73	0,22	0,73
2000s	0,11	0,75	0,41	0,75
<i>Marital status</i>				
First marriage (reference)				
Cohabiting never married	1,34	0,22	1,22	0,23
Cohabiting parted/divorced	2,01	0,48	1,30	0,65
Remarriage	0,42	0,21	0,08	0,24
<i>Educational qualification</i>				
Higher qualifications				
Intermediate or low qualificaions	-0,21	0,16	-0,74	0,17
No qualifications	-0,44	0,22	-1,12	0,23
<i>Macro-level characteristics</i>				
Log white-co-ethnic ratio	0,60	0,06	0,62	0,06
Log sex ratio	0,51	0,46	-1,00	0,47
<i>Educational homogamy</i>				
Male partner has higher qualifications (reference)				
Male & female partners have same qualifications	-0,32	0,17	-0,88	0,18
Female partner has higher qualifications	0,23	0,20	-0,59	0,20
<i>Age homogamy</i>				
Male partner is older (reference)				
Male & female partners have same age	-0,28	0,24	-0,22	0,23
Female partner is older	0,51	0,18	0,26	0,18
Constant	-4,81	0,89	-4,40	0,86
Log likelihood χ^2 (df)	958.62(33)		917.63(33)	
Number of observations	2.357		2.240	

Note: Statistically significant results at least at the .05 and .10 levels are highlighted in bold and italicised respectively. Source: General Household Survey 1988–2006

Besides, the effects of age at union on intermarriage could also be correlated with the effects of marital status. Compared to first marriage, cohabiting unions, especially amongst those who were divorced/separated, and remarriage are significantly more likely to be an interethnic partnership. Since remarriage or cohabiting unions of divorced/separated individuals are not one's first partnership, naturally these individuals are older in their current partnership compared to those in their first marriage. This might also explain why age at union has a positive relationship with the propensity to intermarry with a White British partner.

The effect of the area ethnic composition appears in an expected direction. The higher the proportion of White British to coethnic members is in a region of residence, the higher is the likelihood of intermarriage with a White British partner. However, there is an endogeneity problem in this analysis because intermarried individuals might have moved to a more or less ethnically segregated residential area after marriage. The robustness of these findings is checked by selecting only a subsample of married individuals who did not change address before and after partnerships (thus assuming that the area ethnic composition represents White-coethnic ratio before partnerships were formed) and replicating the analysis in Table 3 (results are available upon request). The result is consistent and area ethnic composition remains a significant predictor of interethnic union with White British.

Another problem is that in the GHS data, the smallest geographical variable available is measured at the government office region, which basically divides Britain into twelve regions. Although the measurement is rather crude, our findings correspond with that of Muttarak (2007: 27-28) whereby a smaller geographical union (county level) is used and the area ethnic composition is measured before the partnerships were formed. This finding thus confirms the social structure theory that the opportunity for an ethnic member to meet and marry a White British partner depends upon their relative group size to that of a White British population in the area of residence.

The effect of sex ratio on the probability of having a White British partner is statistically significant at the .10 level for ethnic minority men and appears in an expected direction. The higher the number of coethnic men in a region of residence, the higher the likelihood of having a White British woman as a partner. This result also reflects the importance of opportunity structure in one's partner choice.

As expected, the highly educated are more likely to intermarry with a White British partner than their less educated counterparts. This finding raises a subsequent question whether this is a result from educational assortative mating (both intermarried White British and ethnic minorities are highly educated) or does it represent social status exchange behaviour (intermarried ethnic minorities have higher educational attainment than their White British partners). Our findings however seem to contrast both hypotheses. There is no evidence that male and female partners with the same level of educational qualifications are more likely to be in an interethnic partnership. Intermarried ethnic minorities were not found to be more likely to have higher educational qualifications than their White British partners. In fact, in the case of ethnic minority women, the partnership where a male partner has a higher educational qualification is significantly more likely to be an interethnic one.

Interestingly, for age homogamy, a union where a female partner is older than a male partner is likely to be an interethnic one. It is possible that intermarried ethnic minorities

and White British partners are less traditional individuals, thus they are more likely to intermarry and less likely to be concerned about age difference in a couple where a female partner is older than a male partner.

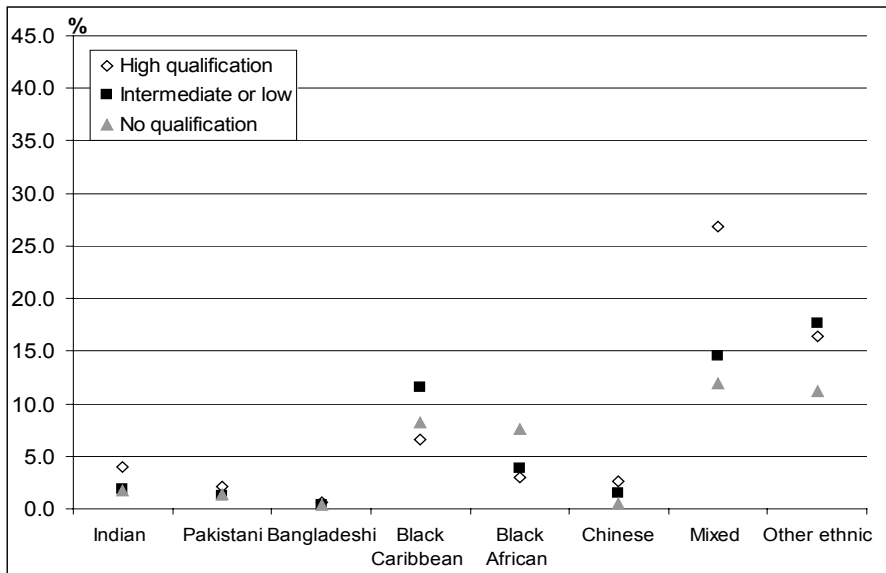
Ethnicity evidently is a significant predictor for the propensity to have a White British partner. Compared to Indians which is a reference group, Pakistanis and Bangladeshis are significantly less likely to intermarry while Black Caribbean and individuals from mixed and other ethnic groups are significantly more likely to have a White British partner than Indians. Chinese women are also more likely to intermarry with a White British man than Indian women. Ethnic diversity in intermarriage patterns remains prevalent even after taking into account related characteristics.

Since there are ethnic and cultural differentials in socioeconomic attainment and educational aspirations, it is possible that the effects of educational qualifications on the propensity to intermarry with a White British partner vary between ethnic groups. A model similar to that of Table 3 is created to test this hypothesis, adding interaction terms between ethnicity and educational qualifications (See Appendix C for estimation results). The interaction terms between ethnicity and educational qualifications are statistically significant suggesting that educational attainment affects the propensity to have a White British partner for each ethnic group diversely. In order to make the results easier to interpret, graphs are plotted of predicted probability of interethnic union with a White British partner for each ethnic group and educational qualification for those started union at age 35-39, holding other covariates at constant⁶. Figures 2 and 3 represent predicted probability of having a White British partner for ethnic minority men and women respectively.

Although we previously found that on the average, ethnic minority members with higher qualifications are more likely to have a White British partner than those with lower or no qualifications, this does not apply to all ethnic groups. The positive relationship between educational qualification and the propensity to intermarriage holds true for Indian, mixed and Chinese men and women and women from Black Caribbean and other ethnic groups. For Black Caribbean men and Black African men and women, educational attainment appears to have a reverse relationship with the likelihood of having a White British partner. For these groups, those with some qualifications or no qualifications have a higher probability of intermarriage than those with higher qualifications. Pakistanis and particularly Bangladeshis have a very low chance of having a White British partner regardless of the level of educational attainment.

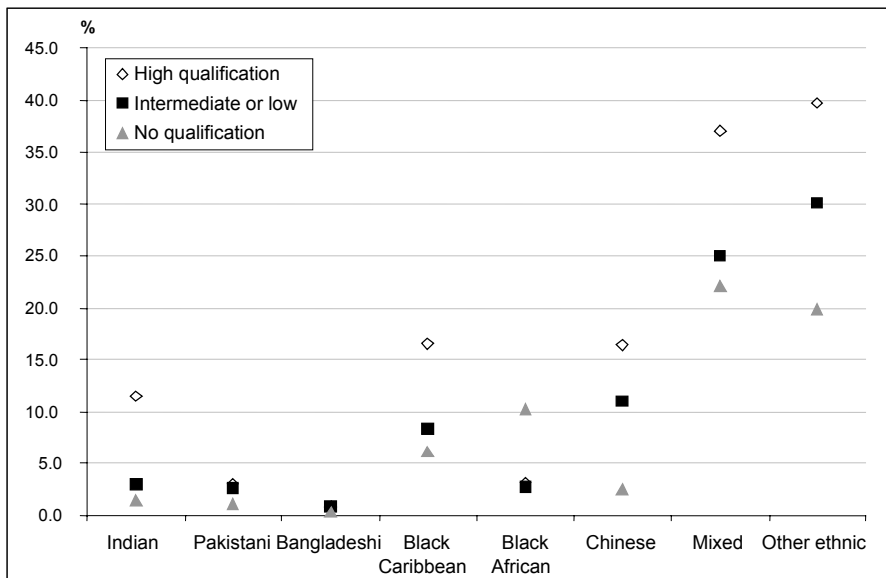
6 Predicted probabilities are computed with the formula:
$$\pi = \frac{\exp(\alpha + x'\beta)}{1 + \exp(\alpha + x'\beta)}$$

Figure 2: Predicted probability of interethnic unions with a White British partner for ethnic minority men



Source: General Household Survey 1988–2006.

Figure 3: Predicted probability of interethnic unions with a White British partner for ethnic minority women



Source: General Household Survey 1988–2006.

It seems that the gap between different levels of educational attainment on the propensity to intermarry with a White British partner is larger for ethnic minority women than for men. For most ethnic groups except for Black African, Pakistani and Bangladeshi, the effects of educational qualification on the chance of having a White British partner appear to be linear. Those with high qualifications have the highest propensity to intermarry followed by those with some qualifications. This is not only because educational institutions possibly give opportunity for women to meet outgroup members but also ethnic minority women with high educational attainment tend to be less traditional and subsequently likely to prefer a White British partner to coethnic men.

The analysis of the interactions between educational qualification and ethnicity shows that the positive effects of educational qualification on the propensity to intermarry are not generalisable to all ethnic groups in Britain. There is some ethnic property that drives patterns of partner choice. As discussed earlier, some ethnic groups, especially South Asians, have a preference for arranged marriage and in choosing a spouse from their country of origin. In the next analysis, we examine the underlying factors in partner choice between interethnic partnership with a White British, coethnic partnership in Britain and coethnic transnational partnership and investigate whether ethnic differences remain after taking into account relevant characteristics.

6.2 Probability of being in different unions for second generation and 1.5 generation

In this section, the analysis is limited to a sample of the second generation and the 1.5 generation because both have more diverse partner choices compared to the first generation who generally are likely to be in a coethnic partnership with a spouse who was similarly born abroad.

In this analysis, a minority ethnic member can in practice choose a partner from 1) the White British population; 2) the coethnic population born in Britain/migrated to Britain before the age of 16; and 3) the coethnic population from the country of origin and migrated to Britain at the age of 16 or above.

Here follows an attempt to explain the determinants of these three partner choices. Since there are three possible outcomes, multinomial logistic regression is employed to estimate the probability of being in a particular type of union. The base outcome is coethnic partnership with a partner born in Britain/migrated to Britain before the age of 16. The results are presented in Table 4.

The effects of individual and macro-level characteristics for the propensity to intermarry with a White British partner for the second generation and the 1.5 generation are similar to the results obtained previously from the full sample. Ethnic differentials in intermarriage patterns remain significant both for men and women.

Table 4: Multinomial logistic estimates of partner choice for second generation (base outcome = coethnic partnership with a partner born in Britain/immigrated to Britain before age 16)

	<i>Men</i>				<i>Women</i>			
	<i>White British partner</i>		<i>Coethnic transnational</i>		<i>White British partner</i>		<i>Coethnic transnational</i>	
	<i>B</i>	<i>S.E.</i>	<i>B</i>	<i>S.E.</i>	<i>B</i>	<i>S.E.</i>	<i>B</i>	<i>S.E.</i>
<i>Ethnic group</i>								
Indian (reference)								
Pakistani	-0,36	0,39	0,87	0,26	-0,70	0,48	1,46	0,25
Bangladeshi	-0,57	0,85	1,16	0,52	-1,62	1,14	2,01	0,48
Black Caribbean	1,05	0,30	-1,68	0,46	0,47	0,32	-0,30	0,34
Black African	0,31	0,58	1,34	0,53	-0,59	0,72	2,09	0,44
Chinese	-0,08	0,79	0,59	0,65	0,51	0,63	1,36	0,60
Mixed	2,18	0,55	1,05	0,72	1,82	0,52	1,74	0,67
Other ethnic	1,72	0,32	0,39	0,37	1,41	0,31	0,10	0,32
<i>Generation</i>								
Second generation (reference)								
1.5 generation arrived at age 6 or before	0,03	0,27	0,01	0,26	0,20	0,28	-0,01	0,26
1.5 generation arrived between age 7-12	-0,71	0,28	0,84	0,24	-0,68	0,31	0,61	0,23
<i>Age at union</i>								
18 or less (reference)								
19-24	0,45	0,68	-0,97	0,46	0,58	0,48	-0,10	0,25
25-29	0,62	0,70	-0,98	0,49	1,22	0,52	-0,32	0,35
30-34	1,12	0,73	-0,58	0,57	0,89	0,57	-0,79	0,52
35-39	1,30	0,78	-1,94	0,85	2,05	0,71	0,75	0,67
40 or over	0,30	0,88	-1,07	0,84	1,17	0,75	0,23	0,85
<i>Marital status</i>								
First marriage (reference)								
Cohabiting	1,22	0,27	-1,39	0,64	1,01	0,28	-1,53	0,49
Remarriage	0,43	0,31	0,69	0,30	0,09	0,33	0,02	0,28
<i>Macro-level characteristics</i>								
Log white-co-ethnic ratio	0,52	0,10	-0,02	0,10	0,59	0,10	-0,09	0,09
Log sex ratio	0,84	0,77	0,85	0,90	-1,40	0,72	0,21	0,70
<i>Educational qualification</i>								
Higher qualifications (reference)								
Intermediate or low qualifications	0,22	0,23	0,50	0,22	-0,42	0,23	0,84	0,23
No qualifications	0,19	0,34	1,57	0,33	-0,75	0,39	0,84	0,31
<i>Educational homogamy</i>								
Male partner has higher qualifications (reference)								
Male & female partners have same qualifications	-0,59	0,24	-0,66	0,23	-0,66	0,27	0,07	0,23
Female partner has higher qualifications	-0,32	0,28	-1,50	0,32	-0,10	0,28	1,32	0,25
<i>Age homogamy</i>								
Male partner is older (reference)								
Male & female partners have same age	-0,43	0,30	-0,44	0,30	-0,23	0,29	-0,52	0,29
Female partner is older	0,37	0,26	0,00	0,27	0,37	0,26	0,17	0,28
<i>Parental place of birth</i>								
Both parents born abroad (reference)								
Both parents born in UK	-0,33	0,36	-1,86	0,70	-0,14	0,35	-1,35	0,63
One parent born in UK, one parent born abroad	1,12	0,39	-0,67	0,53	1,33	0,34	-0,96	0,50
Constant	-3,19	0,84	0,45	0,66	-3,70	0,72	-0,92	0,54
Log likelihood χ^2 (df)	744.82(62)				721.60(62)			
Number of observations	1.020				1.044			

Note: 1) The models also control for period started union but the results are not shown here.

2) Statistically significant results at least at the .05 and .10 levels are highlighted in bold and italicised respectively.

Source: General Household Survey 1988–2006.

Although we cannot measure directly the effects of cultures and norms on partner choice, the estimated effects of the observables can proxy cultural preference to a certain extent. Second generation and 1.5 generation men and women who are more likely to be in a coethnic transnational union are those who formed a partnership at a very young age and are in their first marriage as opposed to a cohabiting union. On the other hand, the effects of age at union and marital status are in an opposite direction for the propensity to have a White British partner. This reflects the fact that those in a transnational coethnic partnership tend to follow traditional customs.

In accordance with existing literature (Modood 1997; Dale 2008), we also find that transnational coethnic partnership is more common amongst those with no or low educational qualifications compared to the highly educated. As for the effects of educational homogamy, those who are more likely to be in transnational marriage, both men and women alike, have a higher level of educational attainment than their partners. This could be explained by the fact that educational qualifications obtained abroad are normally not recognised or regarded as lower than those obtained in Britain. Thus, imported spouses of both British born men and women on the average have a lower level of educational attainment.

We also attempt to understand the family's influence in partner choice. However, this is not directly measurable in our data. Here the effects of parental country of birth on partner choice of the second generation and the 1.5 generation are investigated as this might reflect parental influence in shaping one's preference. We find that individuals whose parents were both born abroad are more likely to marry to/cohabit with a coethnic partner from overseas. Having two parents born outside Britain could mean that strong ties with the country of origin and traditional customs are maintained in a family. Thus, these individuals are more likely to adopt transnational partnership practice.

Taking into account both demographic and socioeconomic characteristics, group differentials in a preference to marry a spouse from overseas remain significant. For men and women alike, Pakistanis and Bangladeshis are more likely to be in transnational unions compared to Indians. Individuals from Black African, Chinese and mixed ethnic origins, especially women, also exhibit a higher chance of being in a transnational partnership than Indians. It should however be noted that the number of mixed ethnic individuals in a transnational union is very small (less than 10) so the results are not conclusive. As for Black Africans and Chinese, there is no supporting literature to show that these two ethnic groups have a preference for importing a partner from overseas like Pakistanis, Bangladeshis and, to a lesser extent, Indians. Since it is not uncommon for Black African and Chinese to migrate to Britain for educational purposes, it is assumed that the high rates of transnational partnership observed in these two groups could be a result of overseas students marrying/cohabiting with a Black African or Chinese coethnic partner who was born in or migrated into Britain at a young age. Examining the educational level of overseas partners of second generation and 1.5 generation Black Africans and Chinese in a transnational partnership reveals that the majority of these partners have high qualifications while the majority of the overseas partners of Indians, Pakistanis and Bangladeshis have low qualifications or none (results available upon request). Thus it is not evident that a prevalence of transnational partnerships amongst Black Africans and Chinese is a result of their cultural preference to import a partner from overseas.

7. Conclusion

The analysis of trends and patterns of family formation in different ethnic groups, gender and generation suggests that generally ethnic minority members who were socialised in Britain are more likely to have a White British partner and less likely to be in a coethnic transnational union. Those born in or who migrated into Britain at a young age, with high educational qualifications, with at least one parent born in Britain and living in a residential area with a high proportion of White British population to coethnic members are assumed to receive similar socialisation to the majority British population. Consequently ethnic minority members with these characteristics tend to follow less traditional patterns of partner choice, i.e. they are more likely to be in an interethnic union with a White British spouse and less likely to be in a coethnic union, particularly a transnational one. The claim of non-traditional patterns of partnership formation is reflected on age at union and marital status. While those who are more likely to be in an interethnic partnership tend to form a union when they are older, and be in a cohabiting union or remarriage, their counterparts who are more likely to marry a coethnic partner transnationally tend to start a union at a very young age and be in their first marriage.

Still, we find a robust effect of ethnic origins on partner choice and this cannot simply be explained by ethnic differentials in socioeconomic status or macro-structural characteristics. The estimation of the likelihood of having a White British partner or having a coethnic transnational partner shows that ethnicity remains a significant determinant of partner choice even when other relevant characteristics are taken into account.

Individuals with mixed ethnic origin are the most likely to have a White British partner. But this result is not unexpected given that mixed ethnic individuals with one White British parent also have a British cultural background and living in Britain means that they have a chance to meet White British persons more frequently than members of minority ethnic groups. Interestingly, Black Caribbeans, especially men, have the second highest rate of intermarriage and it is not the highly educated who are more likely to have a White British partner. A similar finding applies to Black Africans who have a fairly high chance of intermarriage but educational attainment does not have a positive effect on their chances of having a White British partner either. Meanwhile, for Indians, it is those with high educational qualifications who are more likely to intermarry. Partnership formations of Pakistanis and Bangladeshis correspond with their preference in endogamy and arranged marriage described in previous literature (Anwar 1998; Shaw 2001). Interethnic partnership is not common at all for these groups and transnational marriage remains a predominant choice in partner. Black Africans and Chinese, especially women, also have a considerably high chance of being in a transnational marriage but there is no evidence that this is the result of a cultural preference to import a partner from overseas.

This study shows that there are at least four patterns of settlement of ethnic minorities in Britain: 1) integration into white middle class society (e.g. Chinese women and mixed); 2) integration into white working class culture (e.g. Black Caribbean and Black African); 3) the pluralistic model (e.g. Indian); and 4) the economically and socially isolated model (e.g. Pakistani and Bangladeshi).

Using intermarriage as an indicator of integration, Chinese women and individuals with mixed ethnic origins have the highest rate of intermarriage with the White British

population. It is those with high educational attainment who are more likely to intermarry suggesting integration into a white middle class society. On the other hand, Black Caribbean and Black Africans also have high rates of partnerships with a White British spouse but intermarriage is more common amongst those with low or no education suggesting assimilation into a pattern that discourages economic advancement. Meanwhile, despite their high educational and economic achievement, Indians remain socially segregated as indicated by their low level of intermarriage. As for Pakistanis and Bangladeshis, they are economically marginal compared to Indians (Peach 2005) and exhibit the lowest rates of intermarriage across all ethnic groups, well below five percent. This suggests that they are both socially and economically segregated.

This paper describes trends and patterns of immigrants' partnership formation in Britain across ethnic groups, gender and generation. Interethnic partnerships between the White British population and immigrants have been increasing, and will continue to increase, alongside the growing numbers in the younger generation, and particularly the ethnic minority population born in Britain. Partner choice can be partly explained by socioeconomic and macro-level characteristics but ethnic origin remains a significant predictor of partnership patterns. However, with tougher immigration rules, especially on family-forming migration, we might in the future observe a decline of transnational marriage practice. It thus remains to be seen whether a transnational union will be replaced with a coethnic partnership formed in Britain and/or an interethnic partnership, especially in cases where a suitable coethnic partner is not available.

Acknowledgement

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Appendix A: Descriptive statistics of dependent and independent variables

	Men (N=2,357)			Women (N=2,240)		
	Mean	SD	Range	Mean	SD	Range
Dependent variable						
Interethnic union with White British	0,22	0,41	0-1	0,21	0,41	0-1
Coethnic union	0,55	0,50	0-1	0,54	0,50	0-1
Transnational coethnic union	0,23	0,42	0-1	0,25	0,43	0-1
Independent variables						
Ethnic group						
Indian	0,36	0,48	0-1	0,34	0,47	0-1
Pakistani	0,14	0,35	0-1	0,16	0,37	0-1
Bangladeshi	0,04	0,21	0-1	0,04	0,20	0-1
Black Caribbean	0,13	0,34	0-1	0,13	0,33	0-1
Black African	0,07	0,25	0-1	0,06	0,25	0-1
Chinese	0,04	0,20	0-1	0,05	0,22	0-1
Mixed	0,05	0,22	0-1	0,05	0,22	0-1
Other ethnic group	0,16	0,37	0-1	0,16	0,37	0-1
Generation						
Second generation	0,24	0,43	0-1	0,29	0,45	0-1
1.5 arrived at age 6 or before	0,07	0,26	0-1	0,08	0,27	0-1
1.5 arrived between age 7 - 12	0,13	0,33	0-1	0,10	0,30	0-1
First generation	0,56	0,50	0-1	0,53	0,50	0-1
Age at union (grouped)						
18 or less (reference)	0,03	0,18	0-1	0,14	0,34	0-1
19–24	0,31	0,46	0-1	0,47	0,50	0-1
25–29	0,35	0,48	0-1	0,24	0,43	0-1
30–34	0,18	0,38	0-1	0,08	0,28	0-1
35–39	0,07	0,25	0-1	0,04	0,19	0-1
40–44	0,03	0,18	0-1	0,02	0,13	0-1
45 or over	0,02	0,14	0-1	0,01	0,11	0-1

	Men (N=2,357)			Women (N=2,240)		
	Mean	SD	Range	Mean	SD	Range
Period of marriage						
1950s	0,03	0,16	0-1	0,03	0,16	0-1
1960s	0,10	0,30	0-1	0,10	0,30	0-1
1970s	0,22	0,41	0-1	0,21	0,41	0-1
1980s	0,32	0,46	0-1	0,32	0,47	0-1
1990s	0,25	0,43	0-1	0,25	0,43	0-1
2000s	0,09	0,29	0-1	0,10	0,30	0-1
Marital status						
First marriage	0,78	0,41	0-1	0,83	0,37	0-1
Cohabiting never married	0,08	0,28	0-1	0,07	0,26	0-1
Cohabiting parted/divorced	0,01	0,11	0-1	0,01	0,09	0-1
Remarriage	0,12	0,33	0-1	0,09	0,28	0-1
Educational qualification						
High qualification	0,30	0,46	0-1	0,24	0,43	0-1
Intermediate or low qualification	0,43	0,49	0-1	0,44	0,50	0-1
No qualification	0,27	0,45	0-1	0,32	0,47	0-1
Macro-level variables						
Log white-coethnic ratio	3,84	1,22	2,38-7,63	3,86	1,21	2,38-7,27
Log sex ratio	-0,09	0,15	-1,25-0,56	-0,10	0,15	-1,25-0,56
Educational homogamy						
Male partner has higher qualifications	0,34	0,47	0-1	0,31	0,46	0-1
Male & female partners have same qualifications	0,41	0,49	0-1	0,40	0,49	0-1
Female partner has higher qualifications	0,18	0,39	0-1	0,20	0,40	0-1
Age homogamy						
Male partner is older	0,77	0,42	0-1	0,74	0,44	0-1
Male & female partners have same age	0,09	0,29	0-1	0,10	0,30	0-1
Female partner is older	0,14	0,35	0-1	0,16	0,37	0-1

Source: General Household Survey 1988-2006.

Appendix B: Frequency distribution of male and female partners' ethnicity

Male partner's ethnicity	Female partner's ethnicity											Total
	White British	White Other	Indian	Paki-stani	Bangla-deshi	Black Carib-bean	Black African	Black Other	Chi-nese	Mixed	Other ethnic	
White British	108.829	2.922	107	17	4	167	41	14	92	175	420	112.788
White Other	2.335	1.182	15	0	0	9	6	0	8	5	45	3.605
Indian	155	34	1.575	14	2	2	0	0	1	4	13	1.800
Pakistani	44	4	7	730	0	0	0	0	0	1	10	796
Bangladeshi	7	0	4	1	218	0	0	0	0	1	3	234
Black Caribbean	277	18	3	0	0	402	11	8	2	11	11	743
Black African	54	6	0	0	0	29	278	0	0	4	8	379
Black Other	17	2	0	2	0	2	0	16	0	0	0	39
Chinese	25	1	6	0	0	0	0	0	175	2	3	212
Mixed	175	10	6	5	0	5	1	0	0	70	4	276
Other	399	44	8	2	5	8	4	2	12	5	396	885
Total	112.317	4.223	1.731	771	229	624	341	40	290	278	913	121.757

Source: General Household Survey 1988-2006.

Appendix C: Logistic regression of probability of interethnic unions with a White British partner for ethnic minority men and women including interaction terms

	Men		Women	
	<i>B</i>	<i>S.E.</i>	<i>B</i>	<i>S.E.</i>
<i>Educational qualification x ethnic group</i>				
<i>Higher qualifications</i>				
Indian (reference)				
Pakistani	-0,68	0,31	-1,43	0,43
Bangladeshi	-1,85	0,78	-2,63	1,09
Black Caribbean	0,54	0,39	0,42	0,36
Black African	-0,30	0,45	-1,36	0,56
Chinese	-0,46	0,52	0,42	0,42
Mix	2,18	0,51	1,51	0,50
Other ethnic	1,55	0,26	1,62	0,29
<i>Intermediate or low qualifications</i>				
Indian	-0,81	0,27	-1,44	0,33
Pakistani & Bangladeshi	0,34	1,30	1,33	1,51
Black Caribbean	1,42	0,46	0,66	0,47
Black African	<i>1,06</i>	0,63	1,28	0,78
Chinese	0,23	0,93	<i>0,98</i>	0,58
Mix	0,05	0,62	0,88	0,65
Other ethnic	0,90	0,36	1,02	0,41
<i>No qualifications</i>				
Indian	-0,89	0,41	-2,14	0,53
Black Caribbean	1,11	0,57	1,03	0,71
Black African	<i>1,88</i>	0,98	3,37	0,91
Chinese	-0,70	1,19	0,13	0,99
Mix	-0,11	0,84	<i>1,41</i>	0,81
Other ethnic	0,45	0,49	<i>1,16</i>	0,62
Constant	-4,34	0,92	-3,57	0,56
Log likelihood χ^2 (df)	980.17(44)		974.03(44)	
Number of observations	2.469		2.336	

Note:

- 1) The models also control for age at union, period started union, log White-coethnic ratio, log sex ratio and age homogamy. Full estimation results are available upon request.
- 2) Statistically significant results at least at the .05 and .10 levels are highlighted in bold and italicised respectively.

Source: General Household Survey 1988–2006

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Assortative mating by ethnic background and education among individuals with an immigrant background in Sweden¹

Assortative Mating nach ethnischen und Bildungsgesichtspunkten bei Individuen mit Migrationshintergrund in Schweden

Abstract:

This paper analyzes the determinants of assortative mating by ethnicity and education for individuals with an immigrant background in Sweden, focusing on the role of individual, marriage market and parental characteristics. Results indicate that higher levels of host country specific human capital decrease the likelihood of ethnic endogamy and increase the likelihood of educational homogamy. Opportunity as measured by sex ratios and relative group size is found to be positively correlated to both types of assortative mating. Parental assortative mating (ethnic/educational), as a measure of group identity, is found to increase the likelihood of assortative mating. A comparison of marginal effects, by gender, suggests that the social boundaries defined by ethnicity and education in the marriage market are relatively more easily crossed by men with the accumulation of local and general human capital. Likewise, the influence of group identity appears to matter more for women when marriages are based on ethnicity but matter more for men when marriages are based on education.

Zusammenfassung:

In diesem Beitrag werden die Determinanten des nach ethnischen und Bildungsgesichtspunkten ausgerichteten *Assortative Mating* bei Individuen mit Migrationshintergrund in Schweden untersucht, indem die Rolle individueller und elterlichen Charakteristika sowie die des Heiratmarktes in den Blick genommen werden. Die Ergebnisse legen nahe, dass ein höheres Niveau des für das Aufnahmeland spezifischen Humankapitals die Wahrscheinlichkeit ethnischer Endogamie sinken und die Wahrscheinlichkeit der Bildungshomogamie steigen lässt. Gelegenheitsstrukturen, hier gemessen anhand der Geschlechterratio und der relativen Größe der ethnischen Gruppe, sind jedoch positiv mit beiden Typen des *Assortative Mating* korreliert. Elterliche Partnerauswahl (nach ethnischen oder Bildungsaspekten) als ein Maß für die ethnische Gruppenidentität erhöht die Wahrscheinlichkeit des *Assortative Mating*. Ein Vergleich marginaler Effekte nach dem Geschlecht legt nahe, dass die durch die Ethnizität und das Bildungsniveau definierten sozialen Grenzziehungen auf dem Heiratsmarkt von den Männern mit der Akkumulation von örtlichem und allgemeinem Humankapital – relativ gesehen – leichter überschritten werden können. Ebenso gilt, dass der Einfluss der Gruppenidentität für Frauen von größerer Bedeutung ist,

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wenn Eheschließungen auf der Grundlage der Ethnizität erfolgen und dass dieser Einfluss dann für die Männer wichtiger ist, wenn die Eheschließungen auf der Grundlage des Bildungsniveaus erfolgen.

Key words: assortative mating, immigrant background, ethnicity, educational level, marriage market, parental characteristics, sex ratio, group size, gender

Schlagwörter: Assortative Mating, Migrationshintergrund, Ethnizität, Bildungsniveau, Heiratsmarkt, elterliche Charakteristika, Geschlechterratio, Gruppengröße, Gender

Introduction

Sweden has a relatively large immigrant population. Today, approximately fifteen percent of the working age population (16-64) is foreign-born. In addition, another 12 percent of the population is born in Sweden with at least one foreign-born parent. There are three main sources of immigration to Sweden. The first concerns migration from the other Nordic countries, primarily Finland, due to the common Nordic labor market established in 1954. The second concerns labor migrants from Southern and Eastern European countries in the 1950s and 1960s recruited to work in the manufacturing sector, which boomed at the time. The third concerns refugee migration. After the mid-1970s, labor migration became more restrictive and refugee migration (as well as immigration due to family reunification) became the largest source of migration to Sweden. Refugee migration to Sweden stemmed from Hungary in the late 1950s, former Czechoslovakia in the late 1960s, Latin America, the Middle East and Africa in the 1970s, former Yugoslavia (mainly Bosnia-Herzegovina) in the 1990s and Iraq in the early 2000s. In 2005, the five largest immigrant groups in Sweden originated from Finland (15 percent of the foreign born population), Iraq (7 percent), Yugoslavia (6 percent), Iran (5 percent) and Bosnia-Herzegovina (5 percent).

Before the mid-1970s, the foreign born in Sweden had slightly higher average employment levels than natives and similar income levels. Since the mid-1970s, relative employment rates have dropped and a widening immigrant-native employment and income gap has developed over time. Numerous explanations have been forwarded for this shift in relative employment rates, including structural changes in the industrial sector with a shift away from manufacturing jobs, the changing composition of immigrants, the changes in the underlying motivation for migration, skill-biased technological change promoting soft skills such as language and communication, and discrimination against increasingly “visible” immigrants from predominantly non-European countries.² Lately, attention has turned to how family structure, in particular partnership formation, may influence labor market integration.

2 Note that the shift in immigration in the mid 1970s from predominately labor migration to predominately refugee migration also lead to a shift in the skill composition of the foreign born from relatively unskilled labor migration to relatively skilled refugee migration. Today, the proportion with tertiary educations is approximately the same in the native and foreign born population at roughly 30 percent. See Schröder (2007) for an overview of immigrant-native labor market gaps and integration policy in Sweden.

How individuals sort into household units has potential implications not only for individual outcomes such as fertility, employment and income but also for the development of social and economic inequality between groups over time and across generations. Numerous studies in the social sciences and biology show that partnership formation is more likely to take place among individuals with similar characteristics, so-called positive assortative mating, on characteristics such as education, income, socioeconomic background, ethnicity, religion and religiosity as well as height, weight, IQ, and social class (Epstein/Guttman 1984; Mare 1991; McPherson et al. 2001; Pencavel 1998).

Explanations vary as to why individuals mate assortatively. Economists tend to focus on the efficiency gains arguing that similarity in certain partner characteristics simplifies, for example, joint decision making and the rearing of children (Becker 1974). The degree of assortative mating in different dimensions can however also be seen as a measure of the degree of openness in the social structures of interest. How individuals of different ethnic origin sort into household units in a multicultural society, like Sweden, can be seen as an indicator of the strength and persistence of social boundaries between ethnic groups. This is important due to the potential long term impact assortative mating has in sustaining economic and social inequality across generations.

The aim of this study is to analyze the determinants of assortative mating patterns along two dimensions, ethnicity and education, for individuals with an immigrant background in Sweden. Immigrant background is defined as being foreign born or born in Sweden with at least one foreign born parent.³ Most studies analyze assortative mating patterns in one dimension only. We argue that it is important to consider different types of assortative mating patterns. Over time and across immigrant generations, assortative mating on the grounds of ascribed characteristics (endogamy) such as ethnicity should decline in importance while the role of attained characteristics (homogamy) such as education become increasingly important (Kalmijn 1991b; Giddens 1993).

In the paper, we study how different factors play a role in determining these two types of assortative mating patterns, focusing on the influence of three broad categories of factors; preferences, opportunity and third party involvement. Preferences reflect the role of individual characteristics in determining different types of partnership formation. Here, focus is on characteristics such as age, education, and immigrant status (first or second generation) and duration of residence. Opportunity reflects the role of marriage market characteristics, i.e., the availability of potential spouses with the characteristics of interest. Finally, third party involvement concerns the norms and values that can influence marital choice within the social/ethnic group or family to which an individual belongs. Here, focus is on the influence of parental involvement in partnership formation. The intention of this study is therefore to shed light on how individual, marriage market and parental characteristics influence assortative mating by ethnicity and education among first and second generation immigrants in Sweden.

The remainder of this paper is structured as follows. Section 2 provides a brief overview of the research literature on mating patterns and introduces the theoretical background we utilise as well as the hypotheses we intend to test in this paper. This is fol-

3 The word immigrant will be used in this study to denote both the foreign born (first generation immigrants) and those born in Sweden with at least one foreign born parent (second generation).

lowed by a description of the data and the analytic strategy in Section 3. Results are presented in Section 4 and concluding remarks in Section 5.

1. Literature and theory

1.1 Brief overview of the literature

There is a large body of literature on the marriage patterns of different ethnic, immigrant or religious groups.⁴ These studies document for the United States and Europe that a large proportion of immigrants marry within their ethnic or national group or bring spouses from origin countries (Chiswick/Houseworth 2008; Çelikaksoy 2007; Jasso et al. 2000; Lievens 1999; Kalmijin 1993). Endogamous marriages, by national background, are often sustained across generations, although at lower rates and with variations across immigrant groups. Individuals with an immigrant background have the option to marry within their ethnic local marriage market (or bring spouses from origin countries) or marry outside their ethnic marriage market, where the main outside option is intermarrying with a member of the indigenous population in the country of residence or someone with another non-indigenous ethnic background.

Studies looking at intra-marriage within different ethnic groups and intermarriages between immigrants and the indigenous population of the country of residence make use of notions developed in the general research on migration, integration and marriage.⁵ Most studies in this line of research argue that intermarriage is positively associated with the labor market integration of immigrants (Gordon 1964; Lee/Yamanaka 1990; Coleman 1985; Feliciano 2001; Meng/Gregory 2005). One explanation for this correlation is that as immigrants accumulate host country specific human capital, so-called local human capital, such as local language skills, cultural know-how, institutional information and local networks, they develop common characteristics and experiences with other individuals living in that country.⁶ This implies that the boundaries between groups, such as between ethnic groups in the marriage market, become thinner. Ethnic endogamy rates are therefore expected to be negatively correlated with individual characteristics such as immigrant generation, education and years since migration. Indeed, as individuals have higher levels of country specific human capital, the social boundaries defining different marriage markets such as by ethnicity or immigrant background, lose their strength for all parties involved in the decision making process.

There is an even larger body of literature on assortative mating by education.⁷ Empirical studies within this field agree that the correlation between spousal levels of educa-

4 See Qian et al. (2001) for a short review of the literature and Gordon (1964), Lichter/Qian (2001) and Qian/Cobas (2004) for studies on the spousal choice of immigrants.

5 See for example, Lievens (1998), Lichter/Qian (2001), Kalmijn/van Tubergen (2006) and Chiswick/Houseworth (2008).

6 For a detailed explanation of the concept of 'host country specific human capital' see Chiswick/Miller (1995). The terms 'local human capital' and 'host country specific human capital' are used interchangeably in this study.

7 See for example, Buss/Barnes (1986), Henz/Jonsson (2003), Kalmijn (1991a, b) and Mare (1991).

tion tends to be positive. A number of these studies focus on educational homogamy among individuals with immigrant backgrounds (Angrist 2002; Çelikaksoy et al. 2006; Furtado 2006; Jasso et al. 2000; Kalmijn 1993; Lewis/Oppenheimer 2000; Lievens 1999). The consensus in the majority of these studies is that a positive correlation between the education levels of spouses exists both among those who intermarry (Kalmijn 1993; Lievens 1998; Qian 1999; Qian et al. 2001) as well as those who marry within their ethnic group (Çelikaksoy et al. 2006). The probability of educational homogamy among immigrants is otherwise found to be positively correlated with years of schooling and immigrant generation with some variation by country of origin (Çelikaksoy et al. 2006; Kalmijn 1993; Lievens 1998; Qian 1999; Qian et al. 2001).

Few studies have analyzed the marriage patterns of immigrants in Sweden. Dribe and Lundh (2008) study intermarriages to natives (born in Sweden) among immigrants using cross-sectional data from 2003 and find that better educated immigrants, with longer duration of residence who reside outside the major urban areas are more likely to partner with natives. Behtoui (2008) also studies intermarriage to natives of first and second generation immigrants finding that those with origins outside Northwest Europe and North America have smaller probabilities of intermarrying with natives than immigrants originating in Northwest Europe and North America. The same pattern holds true for second generation immigrants.⁸

2.2 Theory and hypotheses

The literature on partnership formation largely focuses on three broad factors thought to influence the decision making process concerning spouse choice; preferences, opportunity for contact, and third party involvement. It is generally assumed that people have a preference for spouses that are similar to themselves in terms of socioeconomic and cultural resources. One reason for this is that the benefits from marriage are thought to be most efficiently utilised when individuals of similar traits match in the marriage market (Becker 1974; Kalmijn 1998; Kalmijn/van Tubergen 2006; Chiswick/Houseworth 2008).⁹ For instance, spouses who have similar values and worldviews will have a relatively easier joint decision making process concerning family issues such as raising children. Becker's theory of marriage therefore predicts positive assortative mating by both socioeconomic and cultural resources such as by educational attainment and ethnic background.

Preferences for a partner with the same ethnic background or level of education may, however, vary across a number of individual characteristics such as own level of education, immigrant generation, duration of residence in the destination country, and country of origin. Individual level of education is pointed out as one of the most important indicators of the values people hold about marriage and family formation and has been found to be negatively correlated with ethnic endogamy and positively correlated with educational homogamy (Kohn 1977; Davis 1982; Kalmijn 1991a, b, 1993, 1998; Mare 1991; Lievens 1998; Qian 1999; Chiswick/Houseworth 2008). Kalmijn (1991b) argues that the

8 See also studies on marriage migration to Sweden (Niedomsyl et al. 2008; Åslund et al., 2009).

9 Becker (1974) predicts positive assortative mating on complementary traits and negative assortative mating on traits that can be substitutes in the household production process.

rate of assortative mating by ascribed characteristics, such as religion and ethnicity is declining over time while assortative mating on the grounds of attained characteristics such as education is becoming more important.

One reason for this trend can be the overall increase in education levels over time. Educational attainment is generally associated with a weaker emphasis on ascribed characteristics versus attained characteristics as a basis for the evaluation of potential spouses (Kalmijn 1998). Thus, it is expected that education will have a negative association with the likelihood of ethnically endogamous marriages and a positive association with the likelihood of educationally homogamous marriages. Other predictions include that being born in the host country, duration of residence and age are negatively associated with the likelihood of endogamy as local human capital is accumulated through these characteristics. An accumulation of local human capital increases the similarities between groups in the country of residence thereby diminishing the strength of the social boundaries defined by ethnicity in the marriage market.

The relationship between educational homogamy and the accumulation of local human capital is largely unexplored. One can surmise that if the accumulation of local human capital has a similar effect as education in general in weakening the emphasis on ascribed versus attained characteristics as a basis for partner choice, then we can expect a positive association between these characteristics and educational homogamy. However, the role of individual preferences may vary by gender and country of origin as there are differences between these groups in marriage norms, traditions and migration histories.

Over and beyond preferences, the opportunity to meet potential mates is an important factor in partner choice. England/Farkas (1986) and Oppenheimer (1988) use search theory, originally developed for the labor market, to relate the efforts a person exerts to find suitable partners to the restrictions that characterize the marriage market. Two perspectives commonly link marriage market characteristics to marriage formation (Lewis/Oppenheimer, 2000). The first emphasizes sex ratios (Akers 1967; Muhsam 1974; Schoen 1983; Bisin/Verdier 2000). Some immigrant groups may experience unbalanced sex ratios in the host country within their ethnic group inducing a higher degree of intermarriage or a search for spouses in home countries.¹⁰ A second perspective known as the “structuralist” approach focuses on the concentration of ethnic groups rather than sex ratios (Blau 1977; Blau et al. 1982; Blau/Schwartz 1984; Bisin/Verdier 2000). The structuralist approach is concerned with social heterogeneity and group cohesion especially among groups small in size relative to the total population. Limited marriage markets via unbalanced sex ratios within immigrant groups in the host country and small group sizes may therefore induce those with immigrant backgrounds to seek mates outside the relevant local marriage market in the form of interethnic spouses or transnational spouses from origin countries (Angrist 2002; Becker 1974, 1991; Çelikaksoy 2006; Çelikaksoy et al. 2006; Gilbertson et al. 1996; Grossbard-Shechtman 1993).

We therefore expect sex ratio and relative group size to be positively associated with the likelihood of endogamous marriages, since these variables indicate the availability of

10 Unbalanced sex ratios can have economic implications as shown in Becker’s (1991) model of marriage and family formation. A change in sex ratios in the direction of a smaller proportion of eligible female candidates, for example, can increase the demand for wives, female marriage rates and family income as females more selectively partner with relatively high income men.

potential spouses from the same ethnic origin within Sweden. Sex ratios and relative group size by ethnicity may also be positively associated with educational homogamy as a greater number of potential spouses enable individuals to be selective on both characteristics (ethnicity and education).

Finally, spousal choice is likely to be influenced by “third party” involvement, such as from the family, the religious group or the ethnic community. Third parties might have an incentive to keep new generations from marrying outside their relevant group (howsoever defined), since mixed marriages may threaten the internal cohesion and homogeneity of the group. Due to data restriction, we focus in this study only on the potential role of parental involvement in partner selection. In the literature, two main components are discussed through which parental involvement (or third party involvement in general) penetrates into the decision making process concerning spousal choice; group identification and group sanctions.

Children are typically brought up with certain norms and values regarding group identification such as an awareness of a common social history (‘a sense of peoplehood’) or a sense of being different from others (Gordon 1964; Akerlof/Kranton 2002). Such feelings are expected to be weaker in families where the parents have mixed backgrounds. The more homogenous the background of the parents, the stronger the identification to the group which also implies less variation in the groups that children socialize into. A strong sense of group identification makes it harder to cross social boundaries in the marriage market. In this study, homogeneity in parental background is measured by parental ethnic endogamy and parental educational homogamy, both of which are expected to be positively associated with the probability of respective type of in-group marriage.

In addition to internalized group identification, group sanctions may also play a role in the decision making process of children. There are limited ways in which parents can interfere in their children’s spousal choice and these are likely to vary by cultural, religious and educational backgrounds. Parents may set up meetings with potential spouses, play the role of matchmaker, give advice and/or opinions or withdraw financial or emotional support. Depending on the social setting of the relevant group, spousal selection not approved by parents may involve high cultural and psychological costs for the individuals involved. The costs of non-conformist behavior are likely to vary by individualistic versus collectivist societies, cultural and religious background as well as by gender. We therefore expect ethnic endogamy and educational homogamy to vary by country or region of birth.

The preferences of parents with regard to group identification and sanctions will vary by their own characteristics, such as their own level of education and own assortative mating patterns. Relatively higher educated parents may prefer to identify themselves and their group on the grounds of educational attainment while less educated parents may have a preference for ethnically identified groups and thus advise their children on these grounds. Parents with homogenous backgrounds, in turn, may prefer their children to marry in a similar manner. However, marriage norms and third party involvement in children’s marriage patterns vary by gender since there is large variation in the role marriage plays in different cultures and religions with regard to gender. Thus, it is predicted that the education of parents will be positively associated with their children’s probability of educational homogamy and negatively associated with the probability of ethnic endogamy while the degree of assortative mating among parents will be positively related to both types of marriages. These correlations are expected to vary by gender and country of origin.

3. Data and analytic strategy

3.1 Data

The data used in estimation stems from registered information at Statistics Sweden (SCB) on the entire working age population (16-65 years of age) residing in Sweden in 2005. Included in the data is detailed individual information on personal and demographic characteristics, education, employment and income. In addition, information is available on country of birth and migration dates for the foreign-born portion of the population as well as some information on parental characteristics.¹¹ Due to partner identification numbers, we are able to link all individuals with their partners. As such, we have detailed information not only on the main individual but also on partners provided that partners fall under the given age restrictions.¹² Partnership is defined as marriage or cohabitation in a household with joint children.¹³

We restrict the original 2005 sample to individuals in partnerships who are born abroad (first generation immigrants) or born in Sweden with at least one foreign born parent (second generation). Individuals with missing information on partner characteristics are dropped from estimation.¹⁴ In addition, individuals with missing information on own or both parents' country of birth are dropped from estimation as well as those with one Swedish and one foreign parent but where no information on the country of origin of the foreign parent is available.¹⁵ These restrictions are necessary in order to define partnerships characterized by similar foreign backgrounds (own or parents), i.e. so-called ethnic endogamy. This gives us a sample of 660,714 individuals with known foreign backgrounds aged 18-65 in partnerships during the year 2005 with detailed information on the main individual and his/her partner.

3.2 Analytic strategy

Two types of assortative mating are analyzed in this study, by country of origin (ethnic endogamy) and by level of education (educational homogamy). In both cases, the probability of being in a partnership characterized by positive assortative mating is estimated

11 The data (Statistics on Immigrants – STATIV) was initially created by the Swedish Integration Board but is now maintained by Statistics Sweden.

12 Due to the age restrictions of the data, we lose information on partners above the age of 65. We can identify the civil status of those with older spouses due to registered information on civil status but we do not have information on spousal characteristics.

13 Data on partnerships stems from information on households. To date, Statistics Sweden tracks only married couples, couples in same-sex registered partnerships and cohabitants with children in common. This implies that we do not have partner information on cohabitants without children.

14 Less than three percent of the original sample is dropped due to missing information on partner characteristics.

15 The original sample of individuals with foreign backgrounds in partnerships consists of 760,120 persons. 515 individuals lack information on own country of birth and 13,268 individuals have no information on either parents' country of birth. An additional 72,078 individuals are dropped due to missing information on the country of birth of the non-Swedish parent. Finally, 3,018 individuals born abroad to two Swedish born parents are also dropped from estimation.

via a number of probit models controlling for varying sets of individual, marriage market and parental characteristics described in greater detail below. All estimations are run separately by gender. Throughout, coefficient estimates are reported as marginal effects evaluated at the mean of explanatory variables.

Ethnic endogamy is defined as a dichotomous variable equal to one if the main individual is born abroad and the partner is from the same country of origin or, if the partner is born in Sweden, one of the partner's parents is from the same country of origin as the main individual, and zero otherwise.¹⁶ If the main individual is born in Sweden, ethnic endogamy is equal to one if the partner is born abroad and comes from the same country of origin as at least one of the main individual's (non-Swedish) parents or, if both are born in Sweden, at least one of the parents of both partners is from the same (non-Swedish) country of origin.

Table 1: Definition of ethnic endogamy: Assortative mating by country of origin:

		Partner:	
Main individual:		Born Abroad	Born in Sweden
Born abroad		1 if both partners from same country of origin, 0 otherwise	1 if at least one of partner's parents has same country of origin with the observed individual, 0 otherwise
Born in Sweden		1 if partner is from same country of origin as at least one parent	1 if at least one of the parents is from same (non-Swedish) country of origin as at least one of partner's parents, 0 otherwise

Educational homogamy is defined as a categorical variable equal to one if partners have the same level of completed education and zero otherwise. Six levels of completed education are identified; less than 10 years of compulsory school (denoted as short compulsory), compulsory school (10 years), secondary school (high school/*gymnasium*), short tertiary, long tertiary (university) and PhD educations.

To begin with, a number of individual characteristics are controlled for in estimation in order to describe individual preferences for certain types of partners.¹⁷ As our sample consists of individuals with foreign backgrounds, we control for being born in Sweden with a foreign background, so called second generation status. The reference group for this variable is first generation immigrants (the foreign born). Duration of residence in Sweden is also controlled for in estimation as is region of origin. Region of origin is classified according to a Statistics Sweden classification into eight groups, Nordic, the European Union Fifteen (EU15), other Europe (non-Nordic, non-EU15), North/Central America, South America, Asia/Middle East, Africa and Oceania. Region of origin is based on own country of origin for first generation immigrants and on mother's country of origin for second generation immigrants or, if the mother is born in Sweden, on father's country of origin. Other individual characteristics included in estimation are years of education and age. Age is divided into four categorical variables, 18-29, 30-39, 40-49 and 50 plus, where the reference group is the youngest age cohort (18-29).

16 We recognize that not all ethnic groups are defined by country of origin but use this more general terminology to describe assortative mating patterns by country of birth or parents' country of birth.

17 See also Table A1 in Appendix for a description of variables used in estimation.

To account for differences in opportunity, two marriage market characteristics are included in estimation, sex ratio and relative group size. Sex ratio is defined as the proportion female to male within each country of origin in the estimations on men, and vice versa, the proportion male to female within each country of origin, in estimations on women. Relative group size is defined as the proportion of females (males) from a given country relative to the population of females (males) in Sweden.

Third party involvement is accounted for by a number of parental characteristics. Mother's and father's education is controlled for, given that this information is available. We include in estimation a categorical variable indicating when information on respective parent's years of education is missing. Two other parental characteristics are also controlled for in estimation, parental ethnic endogamy and parental educational homogamy. Parental ethnic endogamy is equal to one when both parents are known to stem from the same country of origin and zero otherwise. Parental educational homogamy is equal to one when both parents are known to have the same level of education and zero otherwise.

It should be stressed that the analysis presented in this study in no way purports to make causal inferences as current information on mating patterns are used and partners can adjust some characteristics according to each other during the course of their partnership. In addition, data restrictions allow us to analyze only current partnerships without taking into account the number of previous partnerships or the longevity of the current union.

3.3 Descriptive statistics

Sample means by gender are reported in Table 2. In comparison to women, a larger proportion of men are in ethnically endogamous partnership whereas the proportions in educationally homogamous partnerships are similar across genders. Other differences include that women, on average, are somewhat younger than men, as well as small differences in the distribution of regional background by gender.

In terms of parental composition, it should be noted that the vast majority (98.6 percent) of first generation immigrants have two foreign born parents while the remainder have mixed backgrounds with one Swedish born parent and one foreign born parent. Among second generation immigrants, 30 percent have two foreign-born parents, slightly more have a Swedish born mother (40 percent) while approximately 32 percent have a Swedish born father. This implies that there is a considerable amount of missing information on some parental characteristics especially for first generation immigrants whose parents are less likely to reside in Sweden.

The total proportion with missing information on parental education is reported in Table 2. Seventy percent of observations have no information on mother's level of education across both genders. For reasons unknown to us, there is a considerable amount of missing information on father's level of education for women but not for men. For second generation immigrants (not shown), information on mother's education is available for 63-57 percent of women and men respectively. Father's education is still missing for the vast majority of second generation women but is available for over 90 percent of second generation men. In estimation we include controls for missing information on parental education and therefore measure the effect of respective parent's years of education given that such information

exists. This implies no loss of observations but less generalizable results on the correlations between female marriage patterns and father's education/parental educational homogamy. Five percent of men are known to have parents with the same level of education.

Table 2: Descriptive statistics, by gender

	Female	Male
Personal characteristics:		
Ethnic endogamy	0.39	0.42
Educational homogamy	0.44	0.45
Age	41.26	44.18
2nd generation	0.32	0.33
Years residence	11.69	12.58
Years education	11.38	11.43
Missing information on education	0.039	0.031
Nordic	0.35	0.33
EU 15	0.10	0.13
Other Europe	0.22	0.20
North/Central America	0.02	0.02
South America	0.03	0.03
Asia/Middle East	0.25	0.23
Africa	0.04	0.05
Oceania	0.002	0.003
Parental characteristics:		
Mother's level of education	10.06	10.03
Missing information on mother's education	0.70	0.74
Father's level of education	11.92	11.96
Missing information on father's education	0.99	0.14
Parental ethnic endogamy	0.17	0.16
Parental educational homogamy	0.004	0.05
Number of observations	340,880	319,834

More information is available on the country of origin of respective parent. Indeed this information is available for the majority of second generation immigrants (98 percent have registered information on father's country of birth and over 99 percent on mother's country of birth). For first generation immigrants, information on parent's country of origin is available for over 20 percent of the sample. As shown in Table 2, approximately 16-17 percent of individuals in our sample have parents that are known to originate from the same country of origin.

4. Empirical results

4.1 Ethnic endogamy

Initially, the probability of being in an ethnically endogamous partnership is estimated by focusing, in turn, on the role of preferences (individual characteristics), opportunity (marriage market characteristics) and third party involvement (parental characteristics). Results, by gender, are shown in Table 3.

Results of estimation controlling only for preferences is reported in Table 3, Columns 1 and 4, for females and males respectively. As expected, second generation status is associated with significantly lower ethnic endogamy probabilities in comparison to first generation status as is duration of residence. This is true for both men and women though the reduction attributable to each characteristic is significantly larger for men. These results are in line with theoretical predictions of a decline in ethnic endogamy with years of residence in the host country and across immigrant generations due to increased host country specific human capital. Years of education is also found to be negatively correlated with ethnic endogamy probabilities and, this time, the correlation is significantly larger for women.

As expected, older age groups have significantly higher probabilities of being in ethnically endogamous relationships in comparison to the reference group (18-29) with one exception. For women, no difference is found between those aged 30-39 and the reference group. In estimation age groups serve as a proxy for marriage cohorts and are expected to be positively correlated with ethnic endogamy, as shown. In addition, results may reflect a high survival rate for ethnically endogamous unions formed early in life.

In terms of ascribed characteristics, individuals with background in the EU15 countries, North America and Oceania are less likely to be in ethnically endogamous unions relative to the reference group (Nordic background) while those with backgrounds in other European countries and Asia/Middle East are more likely to be in this type of union. In this simple model, South Americans do not significantly differ from those with Nordic backgrounds in their intra-ethnic union probabilities. One notable difference by gender is that while African women have higher probabilities than Nordic women of being in ethnically endogamous partnerships, African men do not differ from their Nordic counterparts, at least not when estimation controls only for differences in individual characteristics. In general, reported coefficient estimates for regional background are large, suggesting that this ascribed characteristic plays an important role for ethnic endogamy.

In Column 2 and 5, controls for potential differences in opportunity (marriage market characteristics) between ethnic groups are added to the model. Two marriage market characteristics are considered, sex ratios and relative group size. As expected, both characteristics are found to be positively correlated with ethnic endogamy for women. For men, only relative group size has a positive and significant association with the likelihood of being in an ethnically endogamous union. This implies that while the size of the ethnic group influences the probability of intra-ethnic unions for both men and women, the relative availability of members of the opposite sex within the ethnic group only influences female ethnic endogamy probabilities. The size of these coefficients is significantly and considerably larger for women, suggesting that marriage market characteristics are relatively more important factors in limiting the choice of women in the marriage market in comparison to men. For men, individual characteristics, especially those signaling integration into the host country, are instead relatively more important determinants in spousal choice on the grounds of ethnicity.

Note that the inclusion of controls for marriage market characteristics changes a number of the results on individual characteristics reported above. In particular, the negative association between second generation status and ethnic endogamy probabilities increases significantly. Those with South American and African origins are now also found to have a significantly higher likelihood of ethnic endogamy relative to those with Nordic backgrounds, regardless of gender.

Table 3: The probability of ethnic endogamy

	(1)	Female (2)	(3)	(4)	Male (5)	(6)
Preferences:						
(Individual characteristics)						
2nd generation	-0.473** (0.002)	-1.000** (0.000)	-1.000** (0.000)	-0.570** (0.002)	-0.993** (0.000)	-0.993** (0.001)
Years residence	-0.008** (0.000)	-0.012** (0.000)	-0.011** (0.000)	-0.012** (0.000)	-0.014** (0.000)	-0.015** (0.000)
Years education	-0.027** (0.000)	-0.024** (0.000)	-0.023** (0.000)	-0.019** (0.000)	-0.017** (0.000)	-0.008** (0.001)
Age 30-39	-0.004 (0.003)	0.030** (0.003)	0.025** (0.003)	0.069** (0.005)	0.079** (0.005)	0.069** (0.005)
Age 40-49	0.050** (0.003)	0.078** (0.003)	0.058** (0.004)	0.161** (0.004)	0.170** (0.004)	0.157** (0.005)
Age 50+	0.094** (0.004)	0.136** (0.004)	0.108** (0.005)	0.251** (0.005)	0.269** (0.005)	0.262** (0.005)
EU15	-0.084** (0.003)	-0.074** (0.005)	-0.069** (0.005)	-0.238** (0.003)	-0.095** (0.004)	-0.091** (0.004)
Other Europe	0.138** (0.003)	0.324** (0.003)	0.325** (0.003)	0.157** (0.003)	0.272** (0.003)	0.270** (0.003)
North America	-0.239** (0.004)	-0.162** (0.007)	-0.156** (0.007)	-0.304** (0.003)	-0.212** (0.006)	-0.210** (0.006)
South America	-0.003 (0.005)	0.238** (0.006)	0.250** (0.006)	0.002 (0.005)	0.197** (0.006)	0.199** (0.006)
Asia/Mid. East	0.188** (0.003)	0.360** (0.003)	0.364** (0.003)	0.203** (0.003)	0.350** (0.003)	0.349** (0.003)
Africa	0.146** (0.005)	0.279** (0.006)	0.284** (0.006)	0.002 (0.005)	0.219** (0.006)	0.223** (0.006)
Oceania	-0.281** (0.010)	-0.317** (0.007)	-0.311** (0.007)	-0.347** (0.004)	-0.302** (0.010)	-0.299** (0.010)
Opportunity:						
(Marriage market characteristics)						
Sex ratio		0.455** (0.004)	0.444** (0.004)		0.001 (0.003)	0.006* (0.003)
Rel. group size		0.434** (0.003)	0.419** (0.003)		0.248** (0.003)	0.247** (0.003)
Third party involvement:						
(Parental characteristics)						
Mother's education			-0.015** (0.001)			-0.017** (0.001)
Father's education			-0.008 (0.005)			-0.009** (0.001)
Parental ethnic endogamy			0.037** (0.003)			0.017** (0.003)
Pseudo R ²	0.23	0.31	0.32	0.29	0.31	0.31
Observations	340.880	340.880	340.880	319.834	319.834	319.834

Note: Probit models on the probability of being in a relationship characterized by ethnic endogamy. Coefficient estimates are reported as marginal effects evaluated at the mean of explanatory variables. The reference category is first generation immigrants in the 18-29 age group from the Nordic countries with a median relative education and parents who are not from the same country of origin. Also controlled for in estimation are dummy variables indicating missing information on years of education. Robust standard errors in parentheses. * significant at 5%; ** significant at 1%

In the last model, controls for third party involvement (parental characteristics) are included in estimation. Results shown in Column 3 and 6 indicate as expected that parental education is negatively correlated with ethnic endogamy. The coefficient for mother's education is negative and significant for both women and men while the coefficient for fathers' education is significant only for men. As noted earlier, information of father's education is missing for a large proportion of women and results for this variable should therefore be interpreted with caution in estimations on women. Parental ethnic endogamy, i.e. that both parents are born in the same country of origin, is positively associated with ethnic endogamy probabilities for both men and women, but the effect is significantly larger for women. These results are in line with hypotheses predicting lower ethnic endogamy among individuals stemming from families with higher levels of education as such families are likely to identify themselves more on the basis of attained characteristics such as education rather than ascribed characteristics such as ethnicity. Parental ethnic endogamy, in turn, is likely to foster a greater degree of ethnic group identity, all else equal, implying greater cultural/psychological costs for children who marry outside the ethnic group, especially for women.

In separate estimations on preferences, opportunity and third party involvement (not shown), preferences are found to have the greatest explanatory power for ethnic endogamy. Statistics for R-squared range from 23 percent to 29 percent (female and male estimations respectively) while opportunity alone explains only about 18 percent of the variation in ethnic endogamy probabilities, and third party involvement (parental characteristics) alone only between 7-8 percent. However, in the full specification (reported in Column 3 and 6), each block of characteristics is found to be jointly significant, although the inclusion of parental characteristics does not improve R^2 statistics markedly once estimation has controlled for individual and marriage market characteristics.

4.2 Educational homogamy

Table 4 reports results of probit models on the probability of being in homogamous relationships as defined by education, i.e., the probability of having a partner with the same level of completed education. As above, we begin by analyzing the role of preferences or individual characteristics on educational homogamy (Columns 1 and 4). Second generation status and duration of residence is found to be positively associated with educational homogamy. We therefore have results in line with expectations that greater local human capital decreases assortative mating on ascribed characteristics (ethnicity) and increases assortative mating based on attained characteristics (education) among immigrants in Sweden. Second generation status is associated with about 6 percentage point higher probabilities of being in educationally homogamous relationships in comparison to first generation status. This is a much smaller increase than the likewise decrease of ethnic endogamy among second generation immigrants reported in Table 3.¹⁸

18 As estimation is based on cross-section data, a strict interpretation is that results reflect differential patterns of educational homogamy and ethnic endogamy by current immigrant generation status rather than a decreasing rate of assortative mating by ethnicity (or an increasing rate of assortative mating by education) over time across generations.

Age is generally found to be positively associated with educational homogamy with the exception of the oldest age category. Those in the 50 plus category are less likely to be in educationally homogamous relationships in comparison to the younger reference group (insignificant for men). The magnitude of the positive coefficients, however, decreases for older cohorts, which signals a higher likelihood of mating on the grounds of educational attainment for those in the 30-39 cohort. In comparison to estimation on ethnic endogamy, individual characteristics in general appear to have a somewhat weaker correlation to educational homogamy. In addition, considerably less of the variation in this type of assortative mating is explained by observable individual characteristics.

In terms of regional background, "other Europeans" are relatively more likely to assortatively mate according to education, while all other groups show lower relative probabilities to the Nordic reference group, with the exception of women from the EU15 and Oceania who do not significantly differ from Nordic women. Differences between regional groups are found to be smaller for educational homogamy than ethnic endogamy, suggesting that cultural norms concerning intra-ethnic marriage vary more than likewise norms concerning intra-education unions.

Marriage market characteristics are added to estimation in Columns 2 and 5. Both sex ratios and relative group size (defined by ethnicity) are found to be positively correlated with educational homogamy for women while only sex ratios are significant for men. This suggests that a larger number of potential mates within the ethnic group increase the likelihood of assortatively mating on both ethnicity and education, especially for women. Again, the role of opportunity for educational homogamy is found to be smaller than that for ethnic endogamy as reflected in significantly and considerably lower estimated marginal effects. Note also, that the inclusion of marriage market characteristics in estimation alters earlier reported results concerning second generation status for women. Second generation females do not significantly differ from first generation females in their propensity to partner with men of the same educational level when estimation controls for differences in opportunity.

In the full model specification, reported in Column 3 and 6, controls for parental characteristics are added to estimation. Results indicate that parental characteristics are not correlated with educational homogamy for women. For men, father's level of education is negatively correlated with educational homogamy and parental educational homogamy is positively correlated. The result for father's education is at odds with expectations concerning a greater emphasis on attained characteristics such as education for partner choice among children raised in relatively highly educated families. Taken together with the negative association also found between father's education and ethnic endogamy, this results may simply reflect a greater freedom of choice for children in more educated families. The positive association between parental educational homogamy and own educational homogamy, in turn, may reflect a greater focus on gender equality for men raised in educationally egalitarian families.¹⁹

19 No correlations between father's level of education and educational homogamy for women may again be due to the large degree of missing information on father's education for women.

Table 4: The probability of educational homogamy

	(1)	Female (2)	(3)	(4)	Male (5)	(6)
Preferences:						
(Individual characteristics)						
2nd generation	0.066** (0.003)	-0.062 (0.033)	-0.117** (0.033)	0.059** (0.003)	0.110** (0.028)	0.065* (0.029)
Years residence	0.002** (0.000)	0.002** (0.000)	0.001** (0.000)	0.002** (0.000)	0.002** (0.000)	0.001** (0.000)
Years education	0.010** (0.000)	0.011** (0.000)	0.011** (0.000)	0.015** (0.000)	0.015** (0.000)	0.041** (0.001)
Age 30-39	0.026** (0.003)	0.027** (0.003)	0.031** (0.003)	0.038** (0.004)	0.038** (0.004)	0.031** (0.004)
Age 40-49	0.008** (0.003)	0.008** (0.003)	0.018** (0.003)	0.019** (0.004)	0.020** (0.004)	0.021** (0.004)
Age 50+	-0.009** (0.003)	-0.007* (0.003)	0.009* (0.004)	-0.003 (0.004)	-0.002 (0.004)	0.010* (0.004)
EU15	0.002 (0.003)	-0.010** (0.003)	-0.010** (0.003)	-0.018** (0.003)	-0.015** (0.003)	-0.014** (0.003)
Other Europe	0.019** (0.003)	0.026** (0.003)	0.025** (0.003)	0.021** (0.003)	0.019** (0.003)	0.017** (0.003)
North America	-0.015* (0.006)	-0.021** (0.006)	-0.021** (0.006)	-0.036** (0.006)	-0.035** (0.006)	-0.034** (0.006)
South America	-0.015** (0.005)	-0.011* (0.005)	-0.014** (0.005)	-0.015** (0.005)	-0.017** (0.006)	-0.020** (0.006)
Asia/Mid. East	-0.059** (0.003)	-0.058** (0.003)	-0.061** (0.003)	-0.067** (0.003)	-0.067** (0.003)	-0.068** (0.003)
Africa	-0.098** (0.005)	-0.107** (0.005)	-0.108** (0.005)	-0.114** (0.004)	-0.112** (0.005)	-0.110** (0.005)
Oceania	-0.039 (0.021)	-0.070** (0.021)	-0.071** (0.021)	-0.070** (0.017)	-0.064** (0.017)	-0.062** (0.017)
Opportunity:						
(Marriage market characteristics)						
Sex ratio		0.055** (0.003)	0.058** (0.003)		0.020** (0.003)	0.019** (0.003)
Rel. group size		0.012** (0.003)	0.015** (0.003)		-0.005 (0.003)	-0.004 (0.003)
Third party involvement:						
(Parental characteristics)						
Mother's education			0.001 (0.000)			0.001 (0.001)
Father's education			-0.002 (0.002)			-0.028** (0.001)
Parental education homogamy			0.010 (0.017)			0.079** (0.005)
Pseudo R ²	0.01	0.01	0.01	0.01	0.02	0.02
Observations	340.880	340.880	340.880	319.834	319.834	319.834

Note: Probit models on the probability of being in a relationship characterized by educational homogamy. Coefficient estimates are reported as marginal effects evaluated at the mean of explanatory variables. Reference category is first generation immigrants in the 18-29 age group from the Nordic countries with a median relative education and parents who do not have the same level of education. Also controlled for in estimation are dummy variables indicating missing information on years of education. Robust standard errors in parentheses. * significant at 5%; ** significant at 1%

Note also, that the coefficient for second generation status among women changes again with the inclusion of controls for parental characteristics in estimation. Second generation

women are now found to be associated with *lower* probabilities of being in educationally homogamous unions in comparison to first generation women. This implies that theories concerning the importance of host country specific human capital for an increased focus on attained characteristics such as education in spousal choice only partially pan out in estimation on women. Results may also reflect a selection of first generation female migrants with high levels of educationally homogamous unions.

In general, very little of the variation in educational homogamy probabilities is explained by observed characteristics as shown by low R-squared statistics. Given these low levels, slightly more of the variation in educational homogamy is explained by observed characteristics for men than women. Clearly, observed characteristics (attained and ascribed) play a larger role for spousal choice based on ethnicity than spousal choice based on education for immigrants in Sweden.

4.3 Assortative mating among immigrants with backgrounds in Finland and Iraq

Results reported above reflect the influence of different factors to assortative mating probabilities on average for immigrant groups in Sweden. Due to variations in cultural norms concerning marriage, varying degrees of parental involvement and varying traditions concerning partnerships formation, it is likely that there is a great deal of heterogeneity between ethnic groups in how these characteristics influence partnership formation. We therefore re-estimate our equations on ethnic endogamy and educational homogamy for two of the largest immigrant groups in Sweden, i.e. people from Finland and Iraq. These two groups also represent the two main types of immigrant groups which came to Sweden, namely labor market migrants and refugee migrants, and also stem from two areas of the world with potentially very different norms and traditions concerning partnership formation.

Unadjusted averages indicate that 25 percent of Finnish and 94 percent of Iraqi women are currently in ethnically endogamous relationships. Likewise rates for men are 30 and 85 percent for those with Finnish and Iraqi backgrounds respectively. Table 5 reports results for estimation on the probability of being in an ethnically endogamous union.²⁰ Results indicate considerable heterogeneity in the determinants of ethnic endogamy between these two immigrant groups as well as by gender. Duration of residence is, for example, negatively correlated to ethnic endogamy for all groups, but has a quantitatively larger effect for men (largest for Iraqi men). Education is found to be negatively correlated with ethnic endogamy probabilities for all groups except Iraqi men, but with larger marginal effects for those with Finnish backgrounds. Age is negatively correlated with ethnic endogamy for the Finnish but positively correlated with ethnic endogamy for Iraqis. The finding that older Iraqi cohorts are more likely to marry endogamously and vice versa for Finns, may reflect the importance of changing preferences across marriage cohorts for Iraqis, whereas for Finns, it is rather a reflection of changing marriage market conditions.

20 Note that information on marriage market characteristics do not vary within national groups and are therefore dropped from estimation.

Table 5: The probability of ethnic endogamy, Finland and Iraq

	Female		Male	
	Finland (1)	Iraq (2)	Finland (3)	Iraq (4)
Preferences: (Individual characteristics)				
2nd generation	-0.432** (0.009)	-0.625** (0.071)	-0.646** (0.011)	-0.793** (0.044)
Years residence	-0.006** (0.000)	-0.006** (0.000)	-0.012** (0.000)	-0.017** (0.000)
Years education	-0.033** (0.001)	-0.002** (0.001)	-0.022** (0.002)	-0.004 (0.002)
Age 30-39	-0.045** (0.006)	0.023** (0.004)	-0.074** (0.009)	0.083** (0.008)
Age 40-49	-0.074** (0.007)	0.037** (0.004)	-0.093** (0.009)	0.109** (0.009)
Age 50+	-0.030** (0.008)	0.041** (0.003)	0.020 (0.011)	0.134** (0.006)
Third party involvement: (Parental characteristics)				
Mother's education	-0.005** (0.001)	-0.002 (0.001)	-0.007** (0.001)	0.001 (0.003)
Father's education	-0.003 (0.009)	-- --	-0.004* (0.002)	-0.002 (0.002)
Parental ethnic endogamy	-0.009* (0.004)	0.003 (0.008)	-0.048** (0.004)	0.038** (0.014)
Pseudo R ²	0.15	0.13	0.20	0.12
Observations	80.146	16.186	67.122	17.780

Note: Probit models on the probability of being in a relationship characterized by ethnic endogamy for those with Finnish or Iraqi backgrounds. Coefficient estimates are reported as marginal effects evaluated at the mean of explanatory variables. The reference category is first generation immigrants in the 18-29 age group with a median relative education and parents who are not from the same country of origin. Also controlled for in estimation are dummy variables indicating missing information on years of education. Robust standard errors in parentheses. * significant at 5%; ** significant at 1%

In terms of third party involvement, mother's education is significantly and negatively correlated with ethnic endogamy for the Finnish but insignificant for the Iraqi group, regardless of gender. Finally parental ethnic endogamy has a negative correlation with ethnic endogamy for the Finnish group (quantitatively small coefficient for Finnish women) but a positive correlation for Iraqi men and no significance for Iraqi women.

Turning instead to educational homogamy probabilities for those with Finnish and Iraqi backgrounds, results shown in Table 6 indicate again considerable heterogeneity in the determinants of this type of union between these two immigrant groups. Unadjusted averages indicate much lower variation in educational homogamy across these two countries than that found for ethnic endogamy. 48 percent of the Finnish and Iraqis are in educationally homogamous relationships, regardless of gender. Estimation results indicate that only Iraqi men have an increased probability of educational homogamy among second generation immigrants. No such correlation is found for the other groups. Years of education is positively correlated with educational homogamy for all groups with the exception of Finnish females, where the association is negative and significant. Age is again found to be negatively associated with assortative mating probabilities for those with Fin-

nish backgrounds and positively associated for those with Iraqi backgrounds. Parental characteristics appear to matter more for male educational homogamy probabilities than for likewise female probabilities.²¹ However, mother's education only has a negative influence on male Finnish educational homogamy while father's education influences both Finnish and Iraqi men (negatively). Parental educational homogamy has a positive association with educational homogamy probabilities for Finnish men but a negative association with educational homogamy for Iraqi men.

Table 6: The probability of educational homogamy, Finland and Iraq

	Female		Male	
	Finland (1)	Iraq (2)	Finland (3)	Iraq (4)
Preferences:				
(Individual characteristics)				
2nd generation	0.007 (0.012)	0.089 (0.066)	0.011 (0.015)	0.211* (0.084)
Years residence	-0.000 (0.000)	-0.002 (0.001)	0.001 (0.000)	-0.001 (0.001)
Years education	-0.011** (0.001)	0.028** (0.001)	0.050** (0.002)	0.034** (0.003)
Age 30-39	-0.005 (0.007)	0.061** (0.011)	-0.027** (0.010)	0.073** (0.015)
Age 40-49	-0.048** (0.008)	0.109** (0.012)	-0.084** (0.010)	0.112** (0.015)
Age 50+	-0.083** (0.009)	0.100** (0.017)	-0.104** (0.011)	0.096** (0.017)
Third party involvement:				
(Parental characteristics)				
Mother's education	-0.000 (0.001)	0.003 (0.004)	-0.006** (0.001)	-0.004 (0.005)
Father's education	-0.014 (0.007)	--	-0.032** (0.002)	-0.022** (0.003)
Parental education homogamy	0.015 (0.055)	--	0.105** (0.007)	-0.130* (0.053)
Pseudo R ²	0.01	0.05	0.02	0.02
Observations	80146	16186	67122	17780

Note: Probit models on the probability of being in a relationship characterized by educational homogamy for those with Finnish and Iraqi backgrounds. Coefficient estimates are reported as marginal effects evaluated at the mean of explanatory variables. Reference category is first generation immigrants in the 18-29 age with a median relative education and parents who do not have the same level of education. Also controlled for in estimation are dummy variables indicating missing information on years of education. Robust standard errors in parentheses. * significant at 5%; ** significant at 1%

21 As noted earlier, information on father's education is missing for a large proportion of women in the sample. This is not the case for mother's education. As such, noted differences on the effect of mother's education are externally valid while interpretations of coefficients for fathers' level of education should be made with caution in estimation on women.

5. Conclusions

This study analyzes the determinants of assortative mating by ethnic background (ethnic endogamy) and education (educational homogamy) focusing on the potential role of preferences, opportunity and third party involvement for spousal choice. Estimation is based on the population of working age individuals with an immigrant background, in partnerships, residing in Sweden in 2005.

Results are largely in line with theories suggesting that higher levels of host country specific human capital decrease the likelihood of ethnic endogamy and increase the likelihood of educational homogamy. Both second generation status and duration of residence is found to be negatively correlated with ethnic endogamy probabilities and positively correlated with educational homogamy probabilities with one exception. Second generation women are less likely to be in educationally homogamous relationships than first generation women once controls for differences in marriage market and parental characteristics are included in estimation.

Years of education is also found to be negatively correlated with ethnic endogamy and positively correlated with educational homogamy in line with predictions concerning a greater orientation towards attained characteristics such as education and lower orientation towards ascribed characteristics such as ethnicity with higher levels of education (own and parents). Age as a proxy for marriage cohorts is found to be positively correlated to ethnic endogamy and negatively correlated to educational homogamy, as expected. This may be a reflection of a higher degree of emphasis on educational attainment versus ethnic background for younger cohorts among the immigrant population in Sweden.

Variation in assortative mating probabilities is found by regional background for both types of unions. However, this variation is larger between regional groups in estimation of ethnic endogamy suggesting that varying cultural norms about marriage matter more for assortative mating in terms of ethnicity. This general trend is further confirmed when two culturally distinct groups, i.e. Finns and Iraqis, are compared. The determinants of respective type of assortative mating are found to vary by both country of origin and gender.

Opportunity as measured by sex ratios and relative group size is found to be positively correlated to ethnic endogamy. A comparison of the magnitude of the marginal effects suggests that relative group size and sex ratios have a larger impact on assortative mating by ethnicity for women. Estimation also indicates that a larger number of potential mates within the ethnic group (sex ratios) increase the likelihood of assortative mating on education suggesting that individuals can assortatively mate along both dimensions. The role of opportunity for educational homogamy is found to be smaller than that for ethnic endogamy as reflected by significantly and considerably lower estimated marginal effects.

Father's education is found to be negatively correlated with both ethnic endogamy and educational homogamy for men. The latter result is somewhat unexpected but may reflect a greater freedom of choice in spousal selection among men raised in relatively well educated families. Finally, parental ethnic endogamy is positively associated with own ethnic endogamy while parental educational homogamy is positively associated with own educational homogamy (men).

Our findings indicate that the accumulation of local human capital has a similar role to play as educational attainment; both indicate a shift in preferences in the direction from ascribed characteristics to attained characteristics as a basis for spousal choice. Results indicate that observable individual characteristics play a relatively more important role for male preferences for assortative mating both on the grounds of ethnicity and education, than for female preferences, suggesting that the social boundaries defined by ethnicity in the marriage market can more easily be crossed by males with the accumulation of local and general human capital. In our main models, we also find that the availability of potential spouses in the relevant group increases the probability of intra-group marriages, but the strength of these variables are again stronger for females than that for males, suggesting that marriage market constraints are relatively more binding for females. In addition, parental assortative mating (ethnic/educational) indicators measuring group identity are significantly larger for females than for males in terms of ethnically endogamous marriages and vice versa for educationally homogamous marriages. This result suggests that group identity is relatively more important for females in terms of intra-ethnic marriages and relatively more important for males in terms of educationally homogamous marriages, although there are variations by country of origin.

Taken together, our results suggest that mating along the lines of ascribed characteristics such as ethnicity will decrease over time and across immigrant generations. This is in turn an indicator of social integration between immigrants and natives suggesting that social inequalities between groups should diminish over time, albeit with variations across gender and immigrant groups, due to varying norms about marriage as well as varying parental and community involvement in the marriage decision.

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Appendix

Table A1: Variable definitions

Variable	Definition
Ethnic endogamy	Dummy variable equal to one if individual is in a partnership with someone from the same country of origin or the same national origin, zero otherwise. See Table 1 for exact definition.
Educational homogamy	Dummy variable equal to one if individual is in a partnership with someone having the same level of education, zero otherwise. Definition is based on six levels of completed education; short compulsory, compulsory school, secondary, short tertiary, university and PhD.
2 nd generation	Dummy variable equal to one if individual is born in Sweden with at least one foreign born parent, zero otherwise. Reference category is first generation immigrants.
Years residence	Number of years of residence in Sweden for first generation immigrants.
Years education	Number of years of education.
Age	Four categorical variables indicating which age group the individual belongs to: 18-29, 30-39, 40-49 or 50 plus.
Region of origin	Eight categorical variables indicating the region of origin of the individual. Region of origin is based on own country of birth for first generation immigrants and on mother's country of birth for second generation immigrants unless the mother is born in Sweden, in which case region of origin is based on father's country of origin. The categories are: EU15, Other Europe (non-Nordic, non-EU15), North/Central America, South America, Asia/Middle East, Africa and Oceania.
Sex ratio	The proportion female to male within each country of origin in estimations on men, and vice versa, the proportion male to female within each country of origin, in estimations on women.
Relative group size	Relative group size is defined as the proportion of females (males) from a given country relative to the population of females (males) in Sweden.
Mother's education	Years of education for individual's mother.
Father's education	Years of education for individual's father.
Parental ethnic endogamy	Dummy variable equal to one if parents are known to come from the same country of origin, zero otherwise.
Parental educational homogamy	Dummy variable equal to one if parents are known to have the same level of education, zero otherwise.

Mirna Safi

Patterns of immigrant intermarriage in France: Intergenerational marital assimilation?

Muster interethnischer Eheschließungen von Immigranten in Frankreich: Intergenerationale Assimilation durch Eheschließungen?

Abstract:

This article provides insight into immigrant intermarriage in France. It describes trends of immigrant marital behaviour between 1976 and 2000, compares intermarriage rates amongst different immigrant groups and pays particular attention to changes in marital behaviour across immigrant generations. The statistical analyses take into account individual factors and contextual effects such as the sex-ratios and sizes of the groups in question. Based on data from the *Échantillon démographique permanent* (Permanent Demographic Sample, EDP) of the *Institut National de la Statistique et des Études Économiques* (INSEE), findings point to a stable trend of marital behaviour among immigrant men and women over time, sharp differences in intermarriage rates among groups, and a significant change in the marital behaviour of second-generation immigrants, who intermarry much more often than their parents regardless of their origin.

Keywords: immigration, intermarriage, assimilation, second generation, contextual variables

Zusammenfassung:

Dieser Beitrag gibt Einblick in interethnische Eheschließungen in Frankreich. Es werden Trends des Heiratsverhaltens von Immigrant(inn)en in den Jahren 1976 und 2000 in Frankreich beschrieben, interethnische Eheschließungsraten bei verschiedenen Immigrantengruppen miteinander verglichen, wobei ein besonderes Augenmerk auf Veränderungen im Heiratsverhalten über die Einwanderergenerationen hinweg gerichtet wird. Bei den statistischen Analysen werden sowohl individuelle Faktoren als auch Kontexteffekte, wie z.B. das Geschlechterverhältnis und die Gruppengröße der betreffenden Gruppen, einbezogen. Auf Basis der Daten des *Échantillon démographique permanent* (demographische Dauerstichprobe) des *Institut National de la Statistique et des Études Économiques* (INSEE) deuten die Ergebnisse darauf hin, dass es einen über die Zeit stabilen Trend beim Heiratsverhalten von Männern und Frauen mit Migrationshintergrund, sehr deutliche Unterschiede in den interethnischen Eheschließungsraten zwischen den Einwanderergruppen sowie signifikante Veränderungen im Heiratsverhalten der zweiten Generation der Einwanderer gibt. Letztere gehen – unabhängig von ihrer Herkunft – sehr viel häufiger interethnische Ehen als noch ihre Eltern ein.

Schlagwörter: Immigration, interethnische Ehe, Assimilation, zweite Generation, Kontextvariablen

Introduction

In the United States, the question of intermarriage has been a topic of main concern since the beginning of sociological migration research, with a variety of studies being performed on racial, ethnic and religious intermarriage (Barron 1951; Besanceney 1965; Kennedy 1944, 1952; Park/Burgess, 1921). Much empirical and theoretical research has been produced on this issue, investigating the relationship between intermarriage and the immigrant assimilation process. As Perlmann and Waters (2007) argue, intermarriage is important to assimilation for two main reasons: on the one hand, it reveals the degree to which “ethnic division” is declining in a society and, on the other hand, by creating generations of mixed origin, it participates in the further blurring of ethnic categories. The importance of intermarriage in the assimilation theory accounts for why American sociologists have paid much attention to its patterns and trends (Alba/Golden, 1986; Kalmijn, 1993), as well as to its effect in terms of decreasing ethnic boundaries (Pagnini/Morgan, 1990).

Unfortunately, research carried out in France on this subject is much more limited. Very rarely French studies provide information on immigrant marital behaviour or, more generally, ethnic or racial intermarriage, while publications on social homogamy are very widespread (Bozon/Héran 1987, 1988; de Singly 1987; Desrosières, 1978; Girard, 1964). This is not only because of the difficult nature of studying ethnicity in France, mainly for ideological reasons, but also because data on the ethnic origin of spouses have been very rare¹ (Silberman 1992; Simon, 1998). And yet, official reports on binational marriages and new legislation on naturalization via this type of union encourage discourse about the so-called white weddings² and, more generally, sustain negative image of immigrants.

This study aims at describing patterns of immigrant marriage in France using data that cover a long period of time (1976-2000). Particular attention is paid to the degree to which intermarriage is related to the immigrant assimilation process.

First, I analyse the evolution of immigrant marital behaviour over time. Changes in immigrant marital behaviour over the last several decades are described and confronted to the social and political representations of this issue.³

Secondly, this article studies differences in intermarriage rates among immigrant groups and provides some explanation for these differences. An important contribution lies in the analysis of the determinants of the marriage decision, which relies on both individual and contextual variables.

1 According to the French republican ideal of immigrant integration, there is no ethnic or racial differentiation in French society. This ideological position explains the scarcity of data that would make research on ethnic or racial inequalities in France possible.

2 This expression refers to binational marriages that are arranged so that the foreign spouse can acquire French nationality. In such marriages, spouses are not supposed to have any kind of conjugal life.

3 In this article, I test empirically the supposed increase in white weddings. Obviously, quantitative data cannot be used to differentiate white marriages. However, if such marriages have really increased recently, as some politicians assert, data covering a long period would allow us to detect significant changes in intermarriage patterns. This is what I did in this study.

In my final analysis, I endeavour to measure changes in marital behaviour across generations (Min/Kim 2009). Is intergenerational assimilation occurring in France in terms of immigrant marital behaviour? Does it affect all immigrant groups equally? This article is one of the first studies to provide information on the evolution of exogamous marriages across generations of immigrants in France.

1. Immigration and studies on intermarriage in France

In France, almost 10% of the population is foreign born.⁴ This rate has remained stable over the last thirty years because of a restrictive immigration policy (Boëldieu/Borrel 2000; INSEE 2005a). While, until the 1960s immigrants used to hail mostly from Europe (especially from Spain and Italy), the second half of the 20th century was marked by post-colonial immigration (from the African continent and South-East Asia) as well as important influx of Portuguese immigrants. This “new immigration” in the 1960s was composed mainly of seasonal and temporary workers. However, in the early seventies, immigrants began settling for good because migrating between France and their countries of origin became more and more difficult. These ever more permanent immigrants not only used family reunion procedures to bring their kin to France but also increasingly used the French marriage market to start a family. This article provides information about the latter type of union, i.e. marriages that occurred in France and involved first-generation immigrants or their descendants.

Even though France has one of the most liberal citizenship laws in the world, immigrant naturalization is a slow process; according to the 1999 census, 40% of first-generation immigrants are naturalized (Fougère/Safi 2009). On average, immigrants acquire French citizenship 11 years after arrival. As for second-generation immigrants, they are born French, since the French right to nationality is based on place of birth. This is why they have long been invisible in French public statistics, which used to distinguish only French citizens from non-citizens. Currently, while some important surveys have started to provide information on this population, it is still impossible to isolate second-generation immigrants in census data.

For a long time, the sparse information on immigrant marriage has been published in official reports analysing administrative data. Information on spouse nationality contained in the civil marriage records has been used to analyse the frequency of intermarriage in France. Researchers have continually criticized these data, pointing out that they may lead to erroneous conclusions; however, often they have been obliged to use them as well. Until very recently, the rare quantitative analyses on this subject in France have defined intermarriages as cross-national unions (Munoz-Perez/Tribalat 1984; Neyrand/Sili 1997) or as unions between a foreign-born individual and a French native (Borrel/Tavan 2004; Filhon/Varro 2005; INSEE 2005b). The scarcity of studies on intermarriage in addition to the poor quality of data used in said studies are related to the more general problem of quantitative data on immigration in France, and the fact that public statistics institutions

4 This figure may be regarded as an upper limit; it includes the highest estimations of undocumented immigrants. The official figure given by the census is around 8% (Héran 2007).

have refused to collect detailed data on ethnic origin or, more generally, on ethnicity (Simon 1998). Important progress was made in the 1990s. For the first time in France, a specific survey on immigration was conducted in 1992; it was called *Mobilité géographique et insertion sociale* (MGIS). This survey was a unique source of data on ethnic origin, second-generation immigrants, and places of marriages. It led to many descriptive studies on these issues (Tribalat 1995; Munoz-Pérez/Tribalat 1996). Nevertheless, this research did not include any analysis of the evolution of intermarriage and the second-generation immigrant sample was not large enough to lead to solid findings on their marriage patterns. The weakness of intermarriage studies in France is emblematic of a more general delay in research on immigration and the assimilation process, especially from a quantitative standpoint (Safi 2008a).

Nevertheless, the study of intermarriage may be regarded as the foundation of the sociology of immigration and research on immigrant assimilation. Intermarriage is a key indicator of immigrant assimilation in a host country (Kalmijn 1998; Pagnini/Morgan 1990). Park and Burgess (1921) understood intermarriage, or what they precisely called amalgamation, as a sort of biological dimension of the assimilation process. The terminology used by these authors is very revealing of this biological connotation: cross-fertilization, mulatto, mixing, blending of people, racial intermixture, etc. In his book, *Assimilation in American life*, M. Gordon (1964) developed for the first time a theoretical link between intermarriage and assimilation. Gordon spoke about the marital dimension of assimilation. Intermarriage reinforces primary contacts with the mainstream, boosting structural assimilation, thus constituting a key stage in the process. Since this pioneering work, the classical paradigm of assimilation views intermarriage as going hand in hand with assimilation: intermarriage is more likely to be observed in groups that are more assimilated culturally and economically and becomes more and more frequent across immigrant generations.

However, this relation between intermarriage and assimilation may not apply to all immigrant groups. In the United States, empirical studies influenced by multiculturalism or segmented assimilation theories have shown that some groups may keep low intermarriage rates even when experiencing ascendant economic assimilation (Glazer/Moynihan 1963; Portes/Zhou 1993). Even among old waves of immigration to the United States (i.e. immigrant waves that arrived at the turn of the 20th century), some ethnic groups kept very low intermarriage rates: this was the case in the Jewish and Irish communities for instance. These groups are doubtlessly well integrated in the American society, especially from a socioeconomic point of view. On the other hand, there are some groups in which intermarriage is rather frequent despite the fact that their members experience lasting inferiority in the labour market. A previous study that analysed first-generation immigrant marriage showed that for some groups, patterns of intermarriage and socioeconomic assimilation do not always match in France (Safi 2008b). This study provided an empirical test of the straight-lined assimilation theory for first-generation immigrants. The present article elaborates on this first study by adding some analyses of the long-term evolution of immigrant intermarriage patterns in France. In addition, the study presented here provides information on the marital behaviour of second-generation immigrants.

Moreover, an important contribution of this study is that it takes into account the effect of contextual variables on immigrant marital behaviour. Indeed, marital choice is not

only an individual decision, which would depend on the socio-demographic characteristics of the spouses, but also a macro-phenomenon that is affected by the structure of the population. Influenced by Blau's research on the structural determinants of marriage (Blau et al. 1982; Blau et al. 1984), Hwang, Saenz and Aguirre (1997) show that the complexity of the intermarriage issue can only be understood by using a theoretical framework that incorporates both individual and contextual variables. Even if all immigrants were to prefer endogamous marriage, assortative matching will "structurally" lead some to marriage outside the group. The size of the group and the imbalance between men and women in certain groups are the most important structural variables that may affect intermarriage. They may be regarded as proxies of the probability of encountering a spouse belonging to the same group. The general idea is that if, for structural reasons, this probability is low (small groups and/or groups with imbalanced sex-ratios), this may affect rates of outmarrying no matter how keen members of the group are on marrying someone within the group. In this research, I control for the effect of such structural variables on immigrant marital choice.⁵

2. The data

The data used is extracted from a large French longitudinal database called *Echantillon démographique permanent* (EDP). The EDP was created in 1967 and currently contains data from the 1968, 1975, 1982, 1990 and 1999 censuses. The EDP includes individuals born on certain days of the year: if an individual is listed in the census and meets a date of birth criterion, it is possible to follow that individual during subsequent censuses whenever he/she is listed again. The EDP is not only a compilation of censuses. It also contains information from the civil status records of EDP individuals, whenever such records are collected. This means that the main demographic events (birth, marriage, death, etc.) in the life of EDP individuals are registered in the dataset. In this study, I used data from the marriages records contracted by immigrants in France between 1976 and 2000.⁶

The EDP is valuable for the study of immigration in France for several reasons. First, it allows us to work with reasonably satisfactory numbers of immigrants from about ten groups, which is rather rare in France. Moreover, it is one of the rare French databases that make it possible to analyse second-generation immigrants. Although the census does not ask questions regarding the immigrant origins of an individual's parents, the longitudinal architecture of the EDP gives us a considerable sample of second-generation immigrants. Indeed, if an EDP individual is listed in a previous census as a "child" in a household where the head is an immigrant, it can be assumed that he or she belongs to the second generation. This method of detecting the offspring of immigrants is possible because the EDP allows us to follow individuals over censuses, and also because the census lists

5 See Safi 2008b for more details on the theoretical background lying behind the control for contextual variables in the analyses of marriage behaviour.

6 In this article I used data on marriages that occurred after 1976 in order to be able to include second generation immigrants in the analysis. See the methods of detection of the second generations developed above for more details.

all individuals in the household and gives information on their relationship to the head of the household.

In addition, regarding the specific question of immigrant marriage, the EDP contains flows rather than stocks of marriages whereas most studies on intermarriage rely on cross-sectional data derived from the answers of individuals to questions about their partner's characteristics at the time of the survey. Flow data of the kind used here (i.e. data collected at the time of marriage) more accurately capture the partner's characteristics at the time of the decision to marry, some of which may change thereafter (nationality, labour market status, etc.).

Nevertheless, these data do suffer from several shortcomings, many of which are due to the fact that the EDP, or more specifically the census, was not originally designed to analyse immigration in France and thus is lacking some variables (length of stay, language fluency, etc.) that are crucial for the study of immigrant populations. As far as immigrant marriages are concerned, one specific limitation of the data lies in the fact that only weddings celebrated in France (and for which a marriage record form is collected) can be analysed. The marriages of those immigrants who decide to marry abroad are thus excluded. If these marriages have a high probability of being endogamous, which is a plausible hypothesis, this study will understate the importance of endogamous behaviour among immigrants. This limitation also biases comparison between immigrant groups, since some of them may be more inclined to marry abroad than others. Finally, the most important drawback lies in the fact that no information is available on the immigrant origin of a spouse's parents. A marriage between an immigrant and a French native will thus be regarded as exogamous even if the latter is a descendant of immigrants, a detail that the data obscures. However, since we have a sub-sample of second-generation EDP individuals, their marital behaviour is accounted for in the study. What the data cannot describe at all are marriages between spouses who are both second-generation immigrants.

3. Patters of immigrant marriages in France

3.1 Overview of marriages in France

Figure 1 summarizes the types of unions that can be detected by combining information about the spouses in EDP data. The individuals we follow across the censuses (EDP individuals) may be a French native, or first- or second-generation immigrants. Any information about their spouses is unfortunately only available in marriage records and only gives us their nationality and place of birth. Binational marriages are represented by a solid line while dotted lines are used when spouses are of the same nationality.

Figure 1: Types of marriages observed in the EDP

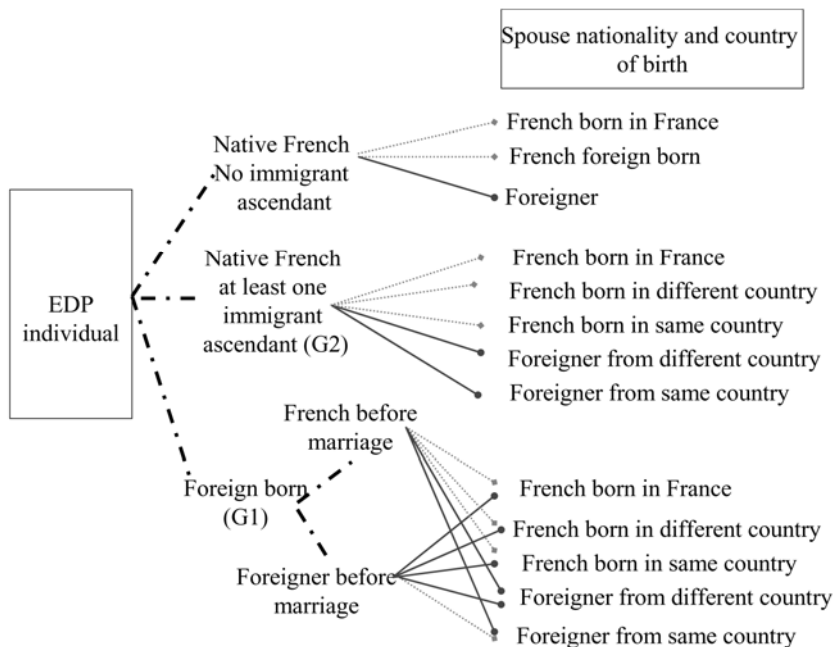


Table 1 shows that, among those marriages celebrated in France, the proportion of marriages between two French natives tends to decrease over the period. The average rate of binational marriages in 1975 was around 6%. The overwhelming majority of these marriages were celebrated between a French native and a foreign spouse. This type of marriage continued to increase and constituted more than 9% of marriages in the 1990s.

Table 1: Types of marriages celebrated in France between 1975-2000

Type of Marriage	1975-1982	1982-1990	1990-2000
French*French	94.51	92.76	90.37
Foreigner*Foreigner	0.33	0.41	0.50
French*Foreigner	5.16	6.84	9.13

Source: EDP, INSEE; N=166.460

3.2 Immigrant marriages

Table 2 reports the proportion of three types of unions: marriages between spouses of the same nationality (the latter being French or non-French), marriages between two spouses of different non-French nationalities, and marriages between French natives and foreigners. The latter type is very frequent within the immigrant population. Second-generation immigrants who are themselves French citizens (because they were born on French soil) seldom choose foreign spouses (12.5%). However, analysing marriages by only looking at

the nationality criterion (which most official reports do) has several limitations. Indeed, it is important to take into account both the nationality and country of birth criteria (Table 3).

Table 2: Types of marriage (nationality criterion)

		Same nationality	Different non-French nationalities	French*Foreigner	N
First generation immigrants	Men	39.9	5.3	54.8	3293
	Women	45.1	6.4	48.5	2836
Second generation Immigrants	Men	93.3	0.0	6.7	2900
	Women	87.5	0.0	12.5	3296
N		8181	356	3788	

Source EDP, INSEE. Marriages celebrated by immigrants and their descendants from 1976 to 2000

When an immigrant who belongs to the first or second generation chooses a French spouse, the latter can be born in France, born abroad in a different country of origin, or born abroad in the same country of origin (Table 3). On the other hand, even marriages with a non-French spouse can be between two individuals with the same country of origin or from a different country.

Table 3: Spouse's nationality and country of birth

		Foreigner from same country	Foreigner from different country	French born in same country	French born in different country	French born in France
First generation immigrants	Men	24.4	5.7	6.8	4.7	58.4
	Women	30.1	7.2	7.0	5.8	49.8
Second generation immigrants	Men	5.3	1.3	2.5	1.3	89.6
	Women	9.5	2.8	4.7	1.7	81.2

Source EDP, INSEE. Marriages celebrated by immigrants and their descendants from 1976 to 2000

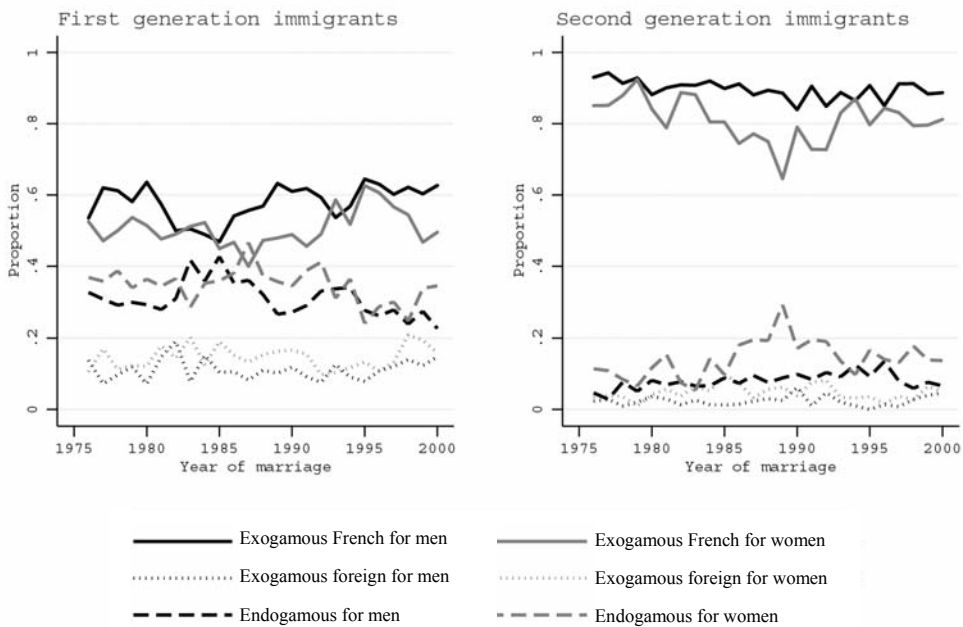
These five possible choices for immigrant spouses may be merged into *three types of marriage*. The “most exogamous” marriage that can be observed in the EDP is one celebrated between a first- or second-generation immigrant and a French spouse born in France. This type of marriage is called *exogamous French*. Two other choices lead to exogamous marriages (i.e., the spouses do not belong to the same ethnic group): when the spouse is foreigner from a different country or when he/she is a French native born in a different country. Such marriages are called *exogamous foreign*. Finally, when a marriage involves two individuals who belong to the same ethnic group, this is called *endogamous*. This is the case whenever the spouse chosen by the immigrant EDP individual is a foreigner from the same country or a French native born in the same country.

Figure 2 reports the evolution of these three types of marriage for first- and second-generation immigrant men and women. While binational marriages clearly increased over the period (Table 1), close examination of a spouse's nationality and country of birth in Figure 2 reveals a much more stable evolution. The early 1980s were characterised by a decrease in exogamous French marriages especially for first-generation men and second-generation women. But the rates rose again between 1985 and 1990 for both men and

women. Generally speaking, first-generation immigrants have a much more diverse marital behaviour than their descendants. The latter overwhelmingly marry French spouses born in France, which are the “most exogamous” marriage that our data can detect.

Figure 2: Evolution of types of immigrant marriage in France

Evolution of types of marriages for second generation immigrant men and women



Source: EDP, INSEE

A comparison between the trend of binational marriages (Table 1), which is clearly increasing, and the trend of the different types of marriages when both nationalities and countries of birth are factored in, suggest that it is the structural transformations in French society (and not intrinsic changes in the marital behaviour of individuals) that may explain the rise of binational marriages. At least two of these structural transformations may be linked to changes in the immigrant population itself. First, an increasing number of first-generation immigrants have become naturalized citizens in the last decades. When an immigrant becomes a French citizen and subsequently marries a foreign spouse, this marriage is binational. The greater number of naturalized immigrants may thus lead statistically to a larger percentage of binational marriages without any real change occurring in the marital preferences of these immigrants. Another structural transformation is linked to the increasing number of second-generation immigrants in France over the last decades. Here again, marriages of second-generation immigrants with foreign spouses are binational. The increase in the rate of binational marriages is thus to a large extent due to the increasing proportion of second-generation immigrants rather than to a consistent change in the marital behaviour of this population.

A considerable proportion of the so-called exogamous marriages presented in Figure 2 may be endogamous. This happens when the spouse is a first- or second-generation immigrant of the same origin, which is a distinction that cannot be made by using EDP data. However, the data report a sharp decrease in endogamous marriages between first- and second-generation immigrants, which suggests a consistent change in marital behaviour across generations. Finally, it is also clear in the data that marital choice seems to be very similar for immigrant men and women. Although the curves are very close, both first- and second-generation immigrant women do intermarry less. The last period is nevertheless characterised by an increasing convergence of the two sexes' marital behaviour.

3.3 The determinants of immigrant marriage in France

The following analyses only consider 18-40 year old immigrants and their offspring (5,804 men and 5,894 women). Table A.1 (in appendix) gives some information about the ethnic origins present in the sample. Indicated by their respective countries of origin, only immigrants from large national groups are considered in the following analyses: Portugal, Spain, Italy, Algeria, Morocco, Tunisia, and Turkey. Immigrants from South-East Asia (Cambodia, Laos and Vietnam) are grouped together, as are those from Sub-Saharan Africa and from Eastern and Western Europe (excluding Spain, Italy and Portugal).⁷

First, I estimate a multinomial logit model that distinguishes among the three types of marriages presented above. The control variables used are both individual and contextual.

3.3.1 Individual variables

I introduced first- and second-generation immigrants as independent variables. Information on date of arrival in France is available in the EDP only for a small number of individuals and cannot be directly used in the models. However, the longitudinal architecture of the EDP allows us to use a proxy of this variable. Indeed, when an immigrant is present in the census preceding his/her marriage (as attested by the existence of a census record), I take this as an indicator of his/her length of stay. Therefore, I distinguish between those first-generation immigrants who were present in France at the time of the census immediately preceding their marriage and those who were not listed in the previous census and are therefore assumed to be more recent arrivals. This method allows us to estimate the effect that the length of stay has on the marital behaviour of first-generation immigrants. Immigrant country of origin is also controlled for. In addition to these two variables, age at marriage and education are included in the models.

7 The sample is not representative of French immigration. It only includes those immigrants who were married in France and therefore excludes all immigrants that arrived in France already married or those who have never married. However, the sub-samples by country of origin are sizeable enough to be analysed quantitatively.

3.3.2 Contextual variables

I control for the demographic imbalance between men and women within immigrant groups by introducing a variable of sex-ratio in the models below. The effect of the sex-ratio is assumed to work in opposite directions for men and women of the same group. When men outnumber women, men tend to marry outside the group and women marry inside it and do so independently of their intrinsic preference for endogamy. I compute the sex-ratio as the ratio between the number of men and women in each ethnic group in the EDP individual's geographical area ("département") of residence and control for this variable in the marriage equation.⁸

Second, I also control for immigrant group size. Indeed, many studies have shown that, independent of the preference for endogamy, members of a small group are more likely to interact with natives and these interactions increase the probability of intermarriage (Fitzpatrick/Hwang 1992; Gurak/Fitzpatrick 1982; South/Messner 1986). Thus, I include in the models a variable that measures the relative size of the immigrant group in the EDP individual's municipality of residence, calculated from the census data.⁹

Table 4 presents the results of a multinomial model of the three types of marriage for immigrant men and women: "endogamous marriage" (the reference in the model), "exogamous foreign marriage" and "exogamous French marriage." For men and women, the probability of entering an endogamous marriage decreases with length of stay and across generations. Length of stay seems to boost the probability of both types of exogamous marriage: marriages with a foreign spouse of different national origin or with a French spouse born in France are significantly more frequent than endogamous marriages. It is, however, interesting to note that length of stay seems to have a stronger positive effect on the probability of entering an exogamous foreign marriage, especially for men. Even if the spouse is not of the same origin, the migration experience itself may lead to a form of endogamy. As for second-generation immigrants, they differ mainly by the fact that they intermarry significantly more than their parents: their probability of entering an exogamous French marriage is much higher.

8 The geographic areas used here are French "départements" of residence. These contextual variables (sex-ratios and group size) were all computed using census data from 1975 to 1999. For example, if the observation period is between 1982 and 1990, I would compute the sex-ratios and group sizes in 1982 and control for them in the models. By doing so, I increase the variation of the computed variable: it varies among ethnic groups, across geographical areas and over the census dates.

9 In order to avoid colinearity, the geographical areas used to calculate sex-ratios and the size of the groups are different (respectively the "département" and the "commune"). Unfortunately, these statistics are available only for first-generation immigrants (since second generations are not detectable in the census). Each time we compute a contextual variable, the ethnic group is understood thus in a restrictive sense: it is composed only by first-generation immigrants.

Table 4: Types of marriage for first- and second-generation immigrants (multinomial logit)

	Men				Women			
	Exogamous		Exogamous		Exogamous		Exogamous	
	Foreigner	French	Foreigner	French	Foreigner	French	Foreigner	French
	Coef	se	coef	se	coef	se	coef	se
Immigrant generations								
<i>First generation not present in the previous census</i>								
First generation present in the previous census	0,44***	0,15	0,16*	0,10	0,35**	0,14	0,25**	0,10
Second-generation immigrants	-0,24	0,19	1,22***	0,11	-0,35**	0,15	1,02***	0,10
Origin								
<i>Algeria</i>								
Sub-Saharan Africa	0,01	0,26	-0,72***	0,16	0,01	0,22	-0,18	0,15
South-East Asia	-0,15	0,27	-1,37***	0,18	-0,341	0,24	-0,95***	0,17
Western Europe	1,07***	0,32	0,70***	0,21	0,78***	0,27	1,18***	0,19
Eastern Europe	0,04	0,40	0,50**	0,20	1,50***	0,33	1,98***	0,25
Spain	1,52***	0,30	1,54***	0,20	0,93***	0,25	1,55***	0,17
Italy	2,05***	0,31	2,16***	0,22	0,74***	0,24	1,70***	0,15
Portugal	-0,88***	0,28	-0,13	0,13	-0,79***	0,22	0,19	0,12
Morocco	0,39	0,27	0,31*	0,16	0,25	0,20	-0,22	0,14
Tunisia	1,19***	0,30	0,88***	0,21	0,52**	0,26	0,07	0,18
Turkey	-0,40	0,39	-0,41	0,21	-2,14***	0,74	-1,49***	0,33
Age at marriage								
<i>18-20</i>								
21-25	0,32	0,41	0,272	0,20	0,22	0,17	0,27***	0,10
26-30	0,41	0,41	0,34*	0,20	0,21	0,19	0,45***	0,12
31-35	0,50	0,42	0,13	0,22	0,50**	0,22	0,28*	0,15
36-40	0,73*	0,44	-0,02	0,24	0,36	0,27	0,11	0,20
Education								
<i>no diploma</i>								
Primary school certificate	0,11	0,28	-0,028	0,17	0,15	0,22	0,30**	0,15
Lower secondary diploma	0,37	0,30	0,45**	0,18	0,33	0,22	0,51***	0,15
Vocational high school	0,05	0,18	0,50***	0,10	0,11	0,15	0,47***	0,10
High school	0,43**	0,20	0,35***	0,13	0,11	0,18	0,51***	0,12
Post-secondary education	0,51***	0,19	0,69***	0,12	0,29*	0,17	0,75***	0,11
Sex ration in 'department'	-0,19	0,18	-0,20*	0,11	-0,31	0,20	-0,22*	0,13
Relative size of the group in municipality	-5,46*	2,02	-5,65***	1,20	-5,41***	1,66	-7,63***	0,24
Intercept	-1,73***	0,53	0,35	0,28	-0,92**	0,37	-0,152	0,24

*** p<0.01, ** p<0.05, *p<0.1

Source EDP, INSEE

As for differences between immigrant groups, compared to Algerian men, all groups of origin seem to choose less frequently a spouse who is originally from the same country, except for South-East Asians, Africans, Turks and to a lesser extent Portuguese. Generally speaking, European immigrant men and women intermarry the most. Tunisian men also seem to have high probabilities of intermarriage. Patterns of marriage are very similar for women, apart from the fact that the vast majority of Turkish women seem to marry foreign men from Turkey. Portuguese men and women and Turkish women seem to be

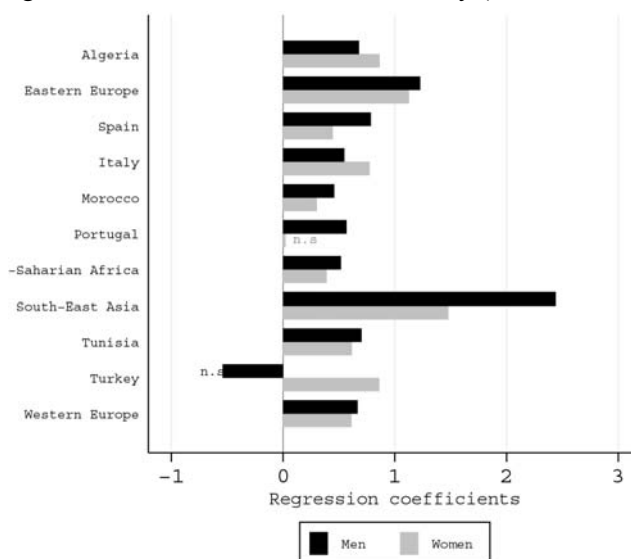
the least inclined to exogamous marriages compared to Algerians: their coefficients are negative or non-significant for both types of exogamous marriages. Their partners are most probably of the same origin.

On the other hand, intermarriage appears to be very selective in terms of human capital: the probability of an immigrant intermarrying increases sharply with education. It is clear that education level has a significant effect mostly when exogamous marriages are with native-born French spouses. The effect of the sex-ratio is very rarely significant. It seems to have a slightly negative effect on the probability that immigrant men and women will choose a French spouse born in France. While this result is counterintuitive for men, it is in line with what we expect for women: the greater a group's men-to-women ratio, the less immigrant women marry outside the group. The size of the group has a significant negative effect for men and women: the larger the group, the less exogamous marriages are celebrated by its members.

4. Intermarriage and intergenerational assimilation

This section focuses on the question of intergenerational differences in marital behaviour and estimate a dichotomous model of the probability of getting married to a French spouse born in France, which is the “most exogamous” type of marriage that can be observed in EDP data. Tables 5 and A.2 (appendix), and Figure 3, allow us to analyse in depth the intergenerational change in the marital behaviour of immigrants. All in all, second generations seem to have a marital behaviour that is significantly different from that of their parents.

Figure 3: Second generation coefficients for each country (interaction effects)



The results of the dichotomous model (Table 5) are similar to those of the multinomial one (Table 4): second generations intermarry significantly more often than first genera-

tions. Africans, South-East Asians, Portuguese and Turks are the least likely to choose their partner from among French natives. The model in Table A.2 (appendix) introduces interaction terms between immigrant generations and countries of origin. It estimates thus an average effect of the country of origin. Figure 3 summarizes the effect of the interaction terms: for each group, the figure provides the coefficients of the second generation immigrants for men and women. The average effects are reported in Table 6 in the appendix.

According to these results, is intergenerational marital assimilation observed in all immigrant groups? While the overwhelming majority of the coefficients estimated for the interaction terms are positive and significant, two exceptions are noted: Turkish men, for whom the coefficient is negative and non-significant, and Portuguese women for whom the coefficient is positive but non-significant. These two ethnic groups are among the least exogamous. Surprisingly, endogamous behaviour is maintained much more by second-generation Turkish men than by their female counterparts. On the other hand, second-generation Portuguese women seem to maintain strong preferences for endogamy.

The magnitude of the coefficients reflects the speed of the transformation of the marital behaviour between first and second-generation immigrants. Asians seem to have the most extreme shift in marital behaviour between first and second generations. However, in Tables 4 and 5, our findings show that they belong to the most endogamous group. This result, apparently contradictory, best reflects how the introduction of interaction terms contributes to analyses. In Table A.2, the average effect of being an Asian immigrant is very significantly negative for men and women (this was also the case in Table 5, before any interaction terms were introduced). Therefore, Asian immigrants are on average the least exogamous immigrants. However, when the focus is on intergenerational change, their coefficients are the highest¹⁰. More generally, the coefficients of the interaction terms are the highest for those immigrants who are on average the least exogamous. On the other hand, an important result is that, with the exception of Portuguese and Turkish immigrants, no sharp differences are observed between men and women. The intergenerational shift in marital behaviour does not seem to be more significant for men.

Even if these results reflect an important change in marital behaviour between first- and second-generation immigrants, they hardly make it possible to make generalizations about immigrant intergenerational assimilation in France. Indeed, the data do not enable a more thorough examination of immigrant marriages, particularly because it is not possible to discern a spouse's immigrant ascendants in the existing data. However, apart from the size of this intergenerational change in immigrant marital behaviour and its interpretation, an important result is that this shift seems to be very similar across groups. Indeed, second generations intermarry more often for all groups and almost equally for men and women. This finding is very different from the one that would be found if we compared the economic assimilation of immigrant groups. Indeed, many studies have shown that in France, economic integration is much more significant for European immigrants and is too slow for other groups, especially those originating from African countries¹¹. Unlike indicators

10 A Fisher test of equality of coefficients shows that estimates for Asian male and female second-generation immigrants are always significantly different from those of other groups. However, this result should be put into perspective, namely because of the small size of the South-East Asian sample.

11 One of the more recent figures showing the disparities between native and immigrant socioeconomic indicators are given in a publication by the *Centre d'études et de recherches sur les qualifications*

of socioeconomic integration, intermarriage rates are significantly higher from one generation to another for all immigrant groups. Given that intermarriage is unanimously regarded as an indicator of immigrant cultural integration¹², these results suggest that cultural integration is not a problem in France, contrary to widespread political discourse.

Table 5: Probability of marriage with a French spouse born in France for first- and second-generation immigrants (probit model)

	Men		Women	
	Coef	se	se	coef
Immigrant generations				
<i>First generation not present in the previous census</i>				
First generation present in the previous census	0,03***	0,05	0,90*	0,05
Second-generation immigrants	-0,74***	0,05	0,63***	0,04
Origin				
<i>Algeria</i>				
Sub-Saharan Africa	-0,43***	0,09	-0,10	0,07
South-East Asia	-0,82***	0,10	-0,58***	0,08
Western Europe	0,20***	0,10	0,49***	0,08
Eastern Europe	0,28***	0,10	0,75***	0,08***
Spain	0,57***	0,09	0,70***	0,07
Italy	0,74***	0,08	0,85***	0,06
Portugal	-0,02	0,07	0,18***	0,06
Morocco	0,13	0,08	-0,20***	0,06
Tunisia	0,30***	0,10	0,01	0,08
Turkey	-0,22	0,12	-0,84***	0,16
Age at marriage				
<i>18-20</i>				
21-25	0,13	0,11	0,13***	0,05
26-30	0,15	0,11	0,21	0,05
31-35	0,01	0,12	0,06	0,07
36-40	-0,15	0,13	0,02	0,09
Education				
<i>no diploma</i>				
Primary school certificate	-0,03	0,09	0,15**	0,07
Lower secondary diploma	0,19	0,09	0,21***	0,06
Vocational high school	0,28***	0,05	0,28***	0,04
High school	0,13*	0,07	0,27***	0,05
Post-secondary education	0,30***	0,06	0,40***	0,05
Sex ration in 'department'	-0,10	0,06	0,14**	-0,07
Relative size of the group in municipality	-2,15***	0,61	-3,37	0,46
Intercept	0,14	0,16	-0,21	0,12

*** p<0.01, ** p<0.05, *p<0.1

Source EDP, INSEE

(CEREQ) on young people who recently left the educational system (Joseph et al. 2008). The data show very high penalties in terms of unemployment and wages for African second-generation immigrants (see particularly pp. 7-8).

- 12 According to the classical work of Gordon (1964), intermarriage (or marital assimilation) is the final stage of the assimilation process. It is a sign that cultural assimilation (adaptation of the home country's ways so that they fit with the culture of the host country) has been achieved.

Conclusion

This article sheds light on patterns of immigrant marriage in France by using particularly effective data. Firstly, the EDP data cover a long period of time, thus making it possible to analyse trends and evolutions. Secondly, this dataset contains a sizeable sample of immigrants belonging to a variety of groups of origin, thus making it possible to compare their propensities for intermarriage. Thirdly, the EDP is one of the very rare public statistics datasets in France that enable the comparison of first- and second-generation immigrant intermarriage. In this article, we take advantage of these positive attributes.

Studying the evolution of immigrant marital behaviour is very instructive: it is the only way to know whether immigrants tend to intermarry more in later generations. While social representations emphasize increased binational marriages in France, suspecting many of them to be “fake”, this article shows that the marital behaviour of first- and second-generation immigrants was rather stable over a thirty-year period, when both nationality and country of birth criteria were taken into account. The increasing number of naturalized immigrants and second-generation immigrants probably lurks in the rise in binational marriages. According to this result, and as far as quantitative data can tell, there is no empirical evidence of an increase in “white weddings” in France.

Analysing the determinants of immigrant marriage shows that differences between countries of origin remain very strong. European immigrants mostly enter exogamous marriages while the non-Europeans maintain strong preferences for endogamy even when they get married in France. However, some exceptions exist: Tunisian men seem to have intermarriage rates very close to those of Europeans, and Portuguese are more similar to Algerians than to Italians. These differences between immigrant groups are significant despite the control for some contextual variables that account for structural determinants of intermarriage.

However, second generation immigrants’ marital behaviour seems much more homogeneous than the one of their parents. Indeed, an intergenerational change seems to be very strong for all immigrant groups, perhaps constituting the fastest changing component of immigrant assimilation in France (especially compared to socioeconomic assimilation). For all countries of origin, second-generation immigrants choose French spouses born in France much more often than their parents did. Turkish and Portuguese immigrants are the only groups for which this result is not valid.

Does this final finding prove that intermarriage is a sort of path to immigrant assimilation in France? Several limitations of this study make answering this question impossible. These limitations are above all related to the quality of the data. Although the EDP is one of the best databases for allowing this kind of study in France, it cannot be used to support definitive conclusions on immigrant assimilation. First, the data do not account for marriages celebrated by immigrants abroad, which leads to an underestimation of endogamous marriages, especially for first-generation immigrants. Second, the EDP does not allow us to detect whether or not the French spouse born in France is a second-generation immigrant. A sizable share of exogamous marriages entered into by second-generation immigrants may therefore be endogamous. Were the distribution of endogamous marriages by second-generation immigrants to differ sharply across groups, this may considerably bias the results of the study.

Despite these numerous drawbacks, the findings presented in this article reflect the fact that the social interactions between the second-generations and French natives are very significant, leading almost “mechanically” to more exogamous marriages within this population. Inter-marriage may therefore be considered more a “natural outcome” of increasing social contact between immigrants and natives than a sign of successful intergenerational assimilation.

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Appendix

Table A 1: The composition of the sample

Origin	Men		Women	
	N	%	N	%
West-Europe	465	8.0	540	9.2
East-Europe	399	6.9	442	7.5
Spain	665	11.5	705	12.0
Italy	990	17.1	975	16.5
Portugal	840	14.5	825	14.0
Subsaharian Africa	305	5.3	325	5.5
South-East Asia	274	4.7	282	4.8
Algeria	989	17.0	1050	17.8
Morocco	428	7.4	438	7.4
Tunisia	309	5.3	246	4.2
Turkey	140	2.4	66	1.1
Total First generation	2931	50.5	2633	44.7
Total Second generation	2873	49.5	3261	55.3
Total	5804	100.0	5894	100.0

Source EDP. INSEE

Table A.2: Probability of marriage with a French spouse born in France for first- and second-generation immigrants (probit model with interaction effects)

	Men		Women	
	Coef	se	se	coef
Origin (average effect)				
<i>Algeria</i>				
<i>Africa</i>	-0,45***	0,08	0,10	0,09
South-East Asia	-1,11***	0,09	-0,51***	0,10
Western Europe	0,12***	0,11	0,66***	0,10
Eastern Europe	-0,15	0,13	0,62***	0,12
Spain	0,52***	0,10	0,98***	0,10
Italy	0,83***	0,10	0,89***	0,11
Portugal	-0,03	0,07	0,54***	0,08
Morocco	0,13	0,08	0,11	0,09
Tunisia	0,31***	0,10	0,18	0,13
Turkey	-0,20*	0,10	-0,72***	0,18
Origin*generation (interaction effect)				
Algeria*2d generation	0,67***	0,07	0,86***	0,07
Sub-Saharan Africa*2d generation	0,51***	0,17	0,40***	0,14
South-East Asia*2d generation	2,43***	0,33	1,47***	0,21
Western Europe*2d generation	0,66***	0,12	0,62***	0,11
Eastern Europe*2d generation	1,22***	0,15	1,16***	0,14
Spain*2d generation	0,78***	0,11	0,46***	0,10
Italy*2d generation	0,55***	0,11	0,78***	0,10
Portugal*2d generation	0,57***	0,09	0,03	0,08
Morocco*2d generation	0,45***	0,12	0,30***	0,10
Tunisia*2d generation	0,70***	0,15	0,59***	0,15
Turkey*2d generation	-0,55	0,39	0,88**	0,39
Age at marriage				
<i>18-20</i>				
21-25	0,063	0,09	0,13***	0,05
26-30	0,05	0,10	0,20***	0,05
31-35	0,11	0,10	0,08	0,07
36-40	-0,27	0,11	0,02	0,09
Education				
<i>no diploma</i>				
Primary school certificate	-0,05	0,08	0,14**	0,07
Lower secondary diploma	0,17**	0,07	0,22***	0,06
Vocational high school	0,27***	0,04	0,29***	0,04
High school	0,16***	0,06	0,30***	0,05
Post-secondary education	0,30***	0,05	0,42***	0,05
Sex ration in 'department'	-0,10*	0,06	0,11*	0,07
Relative size of the group in municipality	-2,53***	0,52	-3,46***	0,47
Intercept	0,29**	0,14	-0,39***	0,12

*** p<0.01, ** p<0.05, *p<0.1

Source EDP, INSEE

Daniela Klaus

Kinderkosten und Familiengründung: Erste Befunde einer Prüfung der Neuen Haushaltsökonomie unter Verwendung von Paardaten

Child-related costs and the transition to parenthood: A preliminary test of the New Home Economics using data from German couples.

Zusammenfassung:

Am Beispiel der Familiengründung wird die empirische Relevanz der Neuen Haushaltsökonomie (NHE) untersucht. Dabei geht dieser Beitrag in zweierlei Hinsicht über die übliche Anwendung dieses Ansatzes hinaus: Einerseits wird, parallel zur Opportunitätenkostentheorie, die oft vernachlässigte Einkommenshypothese berücksichtigt. Andererseits wird das in diesem Erklärungszusammenhang zentrale Konzept der Kinderkosten nicht, wie üblich, über bildungs- oder erwerbsbezogene Indikatoren operationalisiert, sondern über die subjektive Einschätzung der persönlichen Relevanz unterschiedlicher Kostenaspekte von Elternschaft. Die Analyse basiert auf Daten von 237 Paaren, die im Rahmen einer Vorstudie des Projektes *Panel Analysis of Intimate Relationships and Family Dynamics* 2006 erhoben worden sind. Die angesichts des Querschnittscharakters der Daten sowie der eingeschränkten Validität einiger Indikatoren vorläufigen Ergebnisse lassen sich allenfalls als mittelmäßige Bestätigung der NHE interpretieren. Zumindest gewisse Unterstützung erfährt die Opportunitätenkostentheorie: Mit zunehmender Bildung der Frau steigen die von ihr wahrgenommenen Opportunitätenkosten, was die Wahrscheinlichkeit der Familiengründung herabsetzt. Auch die von der Frau angegebenen direkten Kosten, die mit dem Bildungsniveau ihres Partners sinken, beeinflussen die Erstgeburt negativ, was zunächst für die Einkommenshypothese spricht. Allerdings kann nicht bestätigt werden, dass dieser positive Bildungseffekt seine Wirksamkeit über die

Abstract:

The aim of this contribution is to examine basic implications of the New Home Economics (NHE) with respect to family formation using data from couples. This investigation extends the multitude of empirical applications of the NHE in two ways: First, the often neglected income hypothesis is tested simultaneously to the prominent opportunity cost hypothesis. Second, child-related costs are measured directly rather than assumed from individual's socio-economic position since they were indicated by the respondent's individual perception. Within a pre-study of the German *Panel Analysis of Intimate Relationships and Family Dynamics* a sub-sample of 237 couples was conducted in 2006. Due to the cross-sectional nature of the data and the limited validity of some indices the findings are only of preliminary character. They suggest only a moderate confirmation of the NHE. At least, some evidence is provided for the opportunity cost hypothesis. The higher woman's educational level the higher her job related opportunity costs which finally decrease the likelihood of the first birth. No evidence is found with respect to the income hypothesis as man's positive educational effect on family formation seems not to be mediated by the direct child-related costs perceived by his female partner. Counterevidence is also related to the costs perceived by the male partner as they are not only independent of the educational level but also irrelevant in terms of family formation.

Kinderkosten erlangt. Schließlich erweisen sich die von den Männern wahrgenommenen Kinderkosten weder als bildungsabhängig noch haben sie einen Einfluss auf die Familiengründung.

Schlagwörter: Neue Haushaltsökonomie, Familiengründung, Kinderkosten, Paaranalyse

Key words: New Home Economics, family formation, child-related costs, dyadic analysis

1. Einleitung

Im Rahmen der Neuen Haushaltsökonomie (NHE) hat Gary S. Becker (1965, 1981) paarspezifische Kinderkosten in den Mittelpunkt der Erklärung unterschiedlicher Kinderzahlen gestellt. Wird dieser theoretische Ansatz auf die weithin beobachtbaren rückläufigen Fertilitätsraten angewendet, sowie die vor allem in modernen, westlichen Nationen nachlassende Bereitschaft zur Familiengründung, so werden einerseits die gestiegenen finanziellen Aufwendungen hervorgehoben, die für die Ausstattung und Erziehung der Kinder notwendig sind. Auf der anderen Seite werden erwerbsbezogene Opportunitätskosten angeführt, die ebenfalls in den letzten Jahrzehnten für weite Teile der Bevölkerung erheblich zugenommen haben, maßgeblich bedingt durch eine allgemeine Anhebung des (beruflichen) Qualifikationsniveaus in Folge der allgemeinen Bildungsexpansion. Die NHE gilt weithin als gut bestätigt, allerdings fußen die meisten empirischen Studien auf zwei nicht unerheblichen Verkürzungen ihrer theoretischen Basis: Erstens wird die Opportunitätskostenhypothese beinahe nie unter Verwendung direkt erfasster Kosten getestet, vielmehr erfolgt deren Operationalisierung typischerweise über erwerbsbezogene Variablen – allen voran das (Aus-)Bildungsniveau. Dieser Umstand geht nicht zuletzt damit einher, dass in der Umfrageforschung Kinderkosten selten *direkt* erfragt werden. Eine aussichtsreiche, gleichwohl anspruchsvolle Möglichkeit einer direkten Kostenerfassung besteht in der Abfrage ihrer subjektiven Wahrnehmung. Gewinnbringend könnte ein solches Vorgehen deshalb sein, weil die Messung genau an der Stelle ansetzt, wo die Kosten unmittelbar in den generativen Entscheidungsprozess einfließen. Anspruchsvoll ist es insofern, als der Aussagegehalt der hierüber gewonnenen Daten, stärker als die Erfassung des Bildungsniveaus oder der Berufsposition, hinterfragt werden muss. Ein zweites Defizit vieler Studien besteht darin, dass sie der ebenfalls im Rahmen der NHE formulierten Einkommenshypothese wenig Beachtung schenken. Ob also parallel zum negativen Opportunitätskosteneffekt, der gemäß der NHE ausschließlich an die Frau geknüpft ist, das Einkommen des Mannes den behaupteten positiven Einfluss auf das generative Verhalten des Paares ausübt, wird empirisch oft vernachlässigt. Das wiederum mag hauptsächlich daran liegen, dass ein simultaner Test beider Hypothesen Daten von *beiden* Partnern voraussetzt.

Im Rahmen einer Vorstudie des Projektes *Panel Analysis of Intimate Relationships and Family Dynamics* (PAIRFAM)¹ wurde nun ein Design verwirklicht, das für beide

1 Dieses von der DFG geförderte Forschungsprogramm wird an vier bundesweiten Standorten unter der Leitung von Josef Brüderl (Universität Mannheim), Johannes Huinink (Universität Bremen),

Partner die jeweils subjektive Einschätzung der Kinderkosten erhebt. Darüber hinaus liegen für die 237 Paare Angaben zum Bildungsniveau vor, sowie deren retrospektiv erfasste Fertilitätsbiographie. Damit bietet sich die Gelegenheit, zwei Annahmen der NHE empirisch nachzugehen, die einerseits zentral innerhalb ihrer Argumentation sind, andererseits in Analysen typischerweise nicht angemessen berücksichtigt werden. Gleichwohl wird auch die hier präsentierte Untersuchung insofern lückenhaft bleiben, als die durchaus offensichtlichen Vorteile der vorliegenden Daten von nennenswerten Mängeln begleitet werden. So stellt sich die Stichprobe als quantitativ und regional eingeschränkt dar und zentrale Konzepte können nicht optimal abgebildet werden: Die subjektiv wahrgenommenen Kinderkosten werden weitgehend erst *nach* dem untersuchten generativen Verhalten erfragt und das Bildungsniveau kann lediglich über die *schulische* Bildung operationalisiert werden. Deshalb ist diese Arbeit nur als erster Versuch zu sehen, die NHE einer kritischeren Prüfung zu unterziehen als bisher geschehen. Insbesondere die empirische Analyse bleibt explorativer Natur, deren Ergebnisse vorläufig sind und unbedingt weiterer Validierung bedürfen. Der Beitrag dieser Arbeit besteht vor allem in der Präsentation und Diskussion von Befunden, die einerseits das Resultat der Überprüfung nicht trivialer Hypothesen sind und die andererseits Anknüpfungspunkt für weiterführende Forschungsarbeiten in dieser Richtung sein können.

Die Untersuchung fokussiert auf den Übergang zur Elternschaft, wofür zwei Gründe ausschlaggebend sind: Erstens ist die Vermutung plausibel, dass ökonomische Kinderkosten bei der Entscheidung für oder gegen ein *erstes* Kind am stärksten ins Gewicht fallen. Die relativen Preise bzw. Kosten (vor allem die Opportunitätskosten) pro Kind sollten mit jeder weiteren Geburt abnehmen, weshalb auch ihre Entscheidungsrelevanz tendenziell rückläufig sein sollte. Zweitens begründen aktuelle Trends in Deutschland die Entscheidung für diesen Untersuchungsgegenstand: Angaben zum Anteil kinderloser Frauen in Westdeutschland, die derzeit ihre reproduktive Phase abschließen, verweisen auf circa 25% (mit mehr oder weniger großen Abweichungen je nach Datengrundlage); entsprechende Werte für Ostdeutschland fallen (derzeit noch) geringer aus (Kreyenfeld/Konietzka 2007). Verrechnet man diesen Wert um die 5 bis 10%, für die in modernen Gesellschaften von einer biologisch verursachten Kinderlosigkeit ausgegangen wird (ibid.: 15), so verbleiben mindestens 15% Frauen, die mehr oder weniger bewusst auf eigene Kinder verzichten. Das stellt ein durchaus erklärungswürdiges Phänomen dar. Zwar wird dieses empirische Argument durch das hier gewählte Paardesign insofern relativiert, als jüngere Befunde die Bedeutung von veränderten Prozessen der Paarbildung sowie eine sich gewandelte Paarstabilität für die wachsende Kinderlosigkeit herausstellen und andeuten, dass der Übergang zur Elternschaft *innerhalb* von Partnerschaften kaum abgenommen hat (Duschek/Wirth 2005; Klein 2003). Allerdings findet die hier geplante Untersuchung bereits bestehender Partnerschaften durch das eigentliche Ziel dieses Beitrages Rechtfertigung, nämlich einer empirischen Auseinandersetzung mit der NHE, deren Argumentation explizit auf der Haushalts- bzw. Paarebene angesiedelt ist.

Die Arbeit gliedert sich wie folgt: Das nachstehende Kapitel bietet eine kritische Diskussion der derzeitigen empirischen Befundlage zur Erklärung generativen Verhaltens vor

dem Hintergrund der zentralen Argumentationsstränge der NHE. Es schließt mit dem Fazit ihrer bisher unvollständigen Prüfung bzw. Anwendung und formuliert Implikationen für eine adäquate Überprüfung am Beispiel der Familiengründung. Der sich anschließende empirische Teil der Arbeit verfolgt eine erste Annäherung an die Prüfung der abgeleiteten Annahmen. Es werden zunächst die zu Grunde liegenden Daten und Indikatoren vorgestellt, gefolgt von der Präsentation der Ergebnisse sowie deren abschließender Zusammenfassung und Bewertung.

2. Zum Forschungsstand zur Neuen Haushaltsökonomie: Eine kritische Diskussion

Bereits vor der stark formalisierten Familienökonomie von Becker (1965) haben ökonomisch motivierte Erklärungsversuche die Kinderkosten als zentrale Erklärungskategorie rückläufiger Geburtenzahlen herausgearbeitet (für eine Übersicht vgl. Bagozzi/van Loo 1978). Dass die Kosten bzw. die Preise von Kindern im Mittelpunkt dieser Erklärungstradition stehen, ist im Wesentlichen der Einbettung in die klassische Preistheorie geschuldet: Individueller Nutzen wird aus Konsumgütern gezogen, deren Erwerb bzw. Produktion mit finanziellen Aufwendungen verbunden ist. Es kann zwischen verschiedenen Gütern, worunter auch Kinder zählen, gewählt werden. Dabei gilt: Je größer das finanzielle Budget ist, desto mehr Güter sind realisierbar und je mehr Güter zur Auswahl stehen, desto höher ist deren Konkurrenz untereinander. Ausgehend von einem solchen Verständnis behauptete bereits Brentano (1910: 381f.) eine im Zuge des gesellschaftlichen Fortschrittes zunehmende „intentional limitation in the size of the family, whether the motive be the disinclination of the parents to being hampered in the enjoyment of other pleasures, or their fear of losing the earning capacity which renders these other pleasures accessible“. Auch Leibenstein (1957: 163) thematisierte den negativen Einfluss von direkten und indirekten Kinderkosten auf die Neigung Kinder zu bekommen, wobei die indirekten Kinderkosten vor allem mit Blick auf die Frau wirksam werden. Für sie gilt in noch viel stärkerem Maß als für den Mann: „Opportunities for engaging in productive or in various time-consuming consumption activities are likely to grow as income increases“. Bei Becker erfolgte eine explizite Beschränkung auf *ökonomische* Kosten. Seine Argumentation bezüglich der angestrebten Realisierung einer maximalen Nutzenproduktion bezieht sich auf den Haushalt bzw. das Paar als Einheit, womit die Zeitallokation *beider* Partner in den Vordergrund rückt. Die Antwort auf die Frage, welcher Partner sich welchem der beiden Hauptproduktionsbereiche widmet – Erwerbs- oder Haushaltsproduktion – hängt von den jeweils individuellen Produktionsvorteilen ab. Angesichts biologischer und sozialisationsbedingter Vorteile der Frau bei der Hausarbeit, der Geburt und Betreuung von Kindern, setzt diese zumindest den Großteil ihrer Zeit in diesem Bereich ein. Der Mann hingegen geht, begründet durch seine Einkommensvorteile auf dem Arbeitsmarkt, im Idealfall einer Vollzeit-Erwerbstätigkeit nach. Seine Einkommensvorteile ergeben sich einerseits aus seiner im Allgemeinen höheren Berufsbildung. Auf der anderen Seite und unabhängig hiervon resultieren sie aus seinem grundsätzlich höheren Einkommenspotential angesichts realer Einkommensungleichheiten. Gemäß dieser für den Gesamthaushalt vor-

teilhaften klassischen Arbeitsteilung, ist die Entstehung von Einkommensverlusten an die Frau gekoppelt. Dabei sind diese Opportunitätskosten von Kindern um so höher, je höher das Einkommen (potential) der Frau ist und je weniger Zeit sie am Arbeitsmarkt verbringt. „A growth in the earning power of women raises [...] the relative cost of children and thereby reduces the demand for children“ (Becker 1981: 245).

Als Hinweis für die Richtigkeit dieser Überlegungen ließe sich der Befund anführen, dass in Deutschland vor allem Akademikerinnen überdurchschnittlich häufig kinderlos bleiben. Die Anteile Kinderloser bewegen sich in dieser Qualifikationsgruppe je nach Datengrundlage zwischen 25% und 40% (Schaeper 2007: 137). Auch zahlreiche US-amerikanische Studien, die in der Folge der Formulierung der NHE durchgeführt worden sind, konnten negative Einkommens-, (Butz/Ward 1979; Cain/Weininger 1973; de Tray 1973; Hashimoto 1974; Mincer 1963) Erwerbs-, (Conger/Campbell 1978) und Bildungseffekte (Cain/Weininger 1973; Conger/Campbell 1978; Willis 1973) auf die Fertilität nachweisen. Allerdings sind die Ergebnisse nicht durchweg konsistent und beruhen häufig auf der Analyse von Querschnittsdaten oder aggregierten Zeitreihen – Datenmaterial also, das nur eingeschränkt geeignet ist, dem *ursächlichen* Einfluss individueller Ressourcen auf die Familiengründung nachzugehen. Erst der lebensverlaufsanalytische Zugang unter Verwendung von retrospektiv erhobenen Verlaufsdaten, konnte den negativen Einfluss verlässlich bestätigen, den insbesondere das Bildungsniveau der Frau, jenseits des in diesem Zusammenhang entdeckten Institutioneneffektes (Blossfeld/Huinink 1989, 1991; Blossfeld/Jänichen 1990), auf die Geburt des ersten Kindes ausübt (Brüderl/Klein, 1991, 1993; Klein/Lauterbach 1994; Timm 2006). Entsprechend scheint dieser Argumentationsstrang der NHE empirisch fundiert.

Allerdings wird selten die indirekte Prüfung in Frage gestellt, die Ausbildung, Erwerbstätigkeit und Erwerbseinkommen als Proxy-Indikatoren für die anfallenden Opportunitätskosten der Kinderbetreuung verwendet. Verschiedene Gründe mögen dieses Vorgehen legitimieren. Becker (1965) selbst hat eine derartige Annäherung an die Opportunitätskosten vorgeschlagen, ganz in der ökonomischen Tradition der Berufung auf *hard facts*. Die Erfassung entsprechender Informationen ist einfach zu realisieren und selbst eine retrospektive Abfrage von Bildungs- und Erwerbsbiographien ist vergleichsweise zuverlässig möglich. Tatsächlich scheint sich diese Herangehensweise auch bewährt zu haben, wenn man sich die Befunde der oben genannten Studien vor Augen führt. Trotz dieser offenkundigen Vorteile ist einzuwenden, dass es sich hierbei lediglich um eine indirekte Abbildung der Kinderkosten handelt, die aus der individuellen Verfügbarkeit sozio-ökonomischer Ressourcen *geschlossen* werden. Dadurch werden Zusatzannahmen nötig, die selbst nicht direkt überprüfbar sind und das wiederum zieht eine gewisse Uneindeutigkeit bezüglich der behaupteten Mechanismen nach sich. Anhand des am häufigsten zum Einsatz kommenden Indikators der (Aus-)Bildung kann dieses Problem gut verdeutlicht werden: Unterstützt durch inzwischen unzählige Studien in der Tradition des Humankapitalkonzeptes gilt gemeinhin als bestätigt, dass Bildung, vermittelt über die damit einhergehenden Karrierechancen, einen sehr guten Indikator für das Markteinkommen (potential) abgibt (Brüderl/Klein 1993: 196). Hieran werden (geschlechtsspezifische) Rückschlüsse auf die Kinderkosten geknüpft, von denen schließlich der eigentliche (negative) Einfluss auf das generative Verhalten ausgeht. Aber auch alternative Ansätze zur Erklärung von Fertilität behaupten einen negativen Bildungseffekt, jedoch mit anderen

Begründungen. Beispielsweise betonen in soziologischer Tradition stehende Modelle eine mit dem Bildungszuwachs einhergehende Modernisierung von Geschlechterrollen und Normvorstellungen. Vermittelt über einen Bedeutungsverlust von Heirat und Familiengründung werden diese für die rückläufige Geburtenneigung verantwortlich gemacht (u.a. Scanzoni 1975; van de Kaa 1987). Indem also die Kinderkosten empirisch nicht direkt abgebildet werden, kann im Sinne der NHE lediglich *vermutet* werden, dass der etablierte Bildungseffekt seine Wirksamkeit den Kinderkosten verdankt. Eine empirische Trennung zwischen unterschiedlichen Erklärungsfiguren ist auf diese Weise aber nicht möglich. Eine direkte Erfassung der Kinderkosten sollte diesbezüglich mehr Aufschluss bringen.

Bisher gibt es nur wenige Projekte, die dieses Ziel verfolgt haben. Zudem unterscheiden sich die vorliegenden Instrumente sowie die Stichproben, bei denen sie Verwendung gefunden haben, zum Teil erheblich, was deren Ergebnisse nur bedingt vergleichbar macht. Einen frühen Beitrag zur Instrumentenentwicklung hat die *Value of Children-Forschung* geleistet (Arnold et al. 1975; Fawcett 1978; Trommsdorff/Nauck 2005). Jüngste Arbeiten, die in diesem Zusammenhang entstanden sind, können auf einigen Erklärungserfolg im internationalen Vergleich (Nauck 2007), sowie bezogen auf die Aufklärung rückläufigen Kinderreichtums (Klaus 2008) zurückblicken. Die Kinderkosten wurden hier über die individuelle Bedeutsamkeit von Gründen erhoben, die gegen die Geburt von (weiteren) Kindern sprechen. Der wesentliche Nachteil dieses Forschungsprogramms besteht allerdings darin, dass die Kinderkosten zeitlich nicht vor dem beobachteten Geburtenverhalten erfasst wurden. Längsschnittliche Daten hält dagegen der *Familiensurvey* bereit. Eine Auswertung der dort erhobenen negativen Aspekte von Elternschaft bestätigt die NHE nur partiell: Die von Frauen wahrgenommenen Kinderkosten stehen in keiner systematischen Abhängigkeit zu ihrem Bildungsniveau und lediglich von den direkten finanziellen Kinderkosten geht ein negativer Effekt auf die Familiengründungsrates aus. Gänzlich ohne Bedeutung bleiben die Opportunitätskosten (Klein/Eckhard 2005: 171f.). Angesichts des zu Grunde liegenden Paneldesigns könnte das als durchaus gesicherter Befund gewertet werden. Allerdings stellt sich die Abfrage der Kinderkosten hier eher als Erfassung *allgemeiner* Ansichten über die Nachteile von Elternschaft dar und weniger als deren subjektive Bewertung vor dem Hintergrund der eigenen Situation. So erlaubt eine starke Zustimmung auf Aussagen wie „Wenn Frauen eine berufliche Karriere wollen, müssen sie auf ihre Kinder verzichten“ nicht zwangsläufig den Rückschluss auf eine hohe individuelle Relevanz des jeweils angesprochenen Kostenaspektes. Entsprechend sind die fehlenden Zusammenhänge nicht ohne weiteres als Beleg gegen die NHE zu interpretieren. Ganz anders wurden die Kinderkosten in der in den Niederlanden durchgeführten Längsschnittuntersuchung *Panel Study on Social Integration in the Netherlands* erfasst. Kinderlose Befragte sollten angeben, wie (stark) die Geburt eines ersten Kindes beispielsweise ihre berufliche Karriere oder ihre finanzielle Situation beeinflussen würde. In einer auf diesen Daten basierenden Analyse wurden die subjektiv eingeschätzten Kinderkosten aber nur für die Erklärung des Zeitpunktes der Erstgeburt eingesetzt mit dem Befund: „The higher the perceived costs of childbearing for people’s career’s, the longer first childbirth is postponed“ (Liefbroer 2005: 387). Ob und welcher Einfluss von ihnen auf das in der NHE zentrale Geburtenrisiko ausgeht, bleibt damit leider offen. Eine Zwischenbilanz zur Validität und zum möglichen Erkenntnisgewinn einer direkten Kostenabfrage lässt sich in Anbetracht der Heterogenität dieser Studien nur schwer ziehen. Ge-

meinsam ist ihnen allerdings, dass sie ausschließlich *individuelle* Entscheidungsprozesse betrachten.

Das verweist auf das zweite Defizit, das viele empirische Studien zu diesem Thema kennzeichnet: Sie tragen der Prämisse keine Rechnung, dass das Paar und nicht der Einzelne Entscheidungsträger ist. Zwar kann aus verhandlungstheoretischer Sicht diese unterstellte Haushaltsrationalität durchaus in Frage gestellt werden (Ott 1989); geht es aber zunächst darum, sie einer adäquaten Überprüfung zu unterziehen, verlangt das die Berücksichtigung der in diesem Zusammenhang formulierten zweiten Hypothese, die explizit auf die *direkten* Kinderkosten abhebt. Die entsprechende Hypothese hierzu formuliert einen positiven Einfluss des vom Mann erzielten Einkommens auf die Fertilität und auch sie ist an die Annahme gekoppelt, dass der Mann ausschließlich für die Marktproduktion zuständig ist. Mit wachsendem Einkommen verbessern sich die Möglichkeiten des Erwerbs von Marktgütern, die ebenfalls für die Produktion von Kindern notwendig sind. Entsprechend ist ein *positiver Einkommenseffekt* auf die Familiengründung zu ergänzen. Zwar verweisen viele Beiträge mit großer Regelmäßigkeit auf diese Ableitung der NHE, mit beinahe ebensolcher Regelmäßigkeit beschränken sie sich dann aber auf die Überprüfung der Opportunitätenkostenhypothese. Das geht damit einher, dass im Mittelpunkt vieler Studien zur Fertilität ausnahmslos Frauen stehen.² Obwohl in jüngster Zeit Arbeiten entstanden sind, die sich diesem Thema (auch) aus männlicher Perspektive nähern (u.a. Eckhard/Klein 2007), sind Paaranalysen nach wie vor sehr rar. Solange sozio-ökonomische Indikatoren Verwendung finden sollen, sind die hierfür erforderlichen Paarinformationen einfach zugänglich: Entsprechende Partnerdaten können recht valide über die eigentliche Befragungsperson gewonnen werden, was auch ein inzwischen übliches Vorgehen darstellt. Hingegen kann auf die Befragung *beider* Partner nicht verzichtet werden, wenn subjektiv wahrgenommene Kinderkosten erfasst werden sollen und das wiederum verlangt ein sehr aufwendiges Befragungsdesign.

So verwundert es nicht, dass ein Wechsel von der Individual- zur Paaranalyse generativen Verhaltens empirisch bisher nur selten vollzogen wurde, dabei liefern die wenigen, hierzu existierenden Beispiele, weiterführende Erkenntnisse (Klein 2003; Kurz 2005; Wirth 2007). Beispielsweise finden sich bei Wirth (2007: 188) empirische Belege, die für die NHE sprechen: „Die geringste Neigung zur Familiengründung zeigt sich [...] bei einem formalen Bildungsvorsprung der Partnerin, d.h. den hypogamen Paaren. [Und das ist] vor allem dann zu beobachten, wenn der Partner zwar einen allgemein bildenden Schulabschluss, aber keinen beruflichen Ausbildungsabschluss [...] aufweist“. Das bestätigt die NHE, da dieser Konstellation sehr hohe, durch die hohe Bildung der Frau verursachte Opportunitätenkosten unterstellt werden können, bei gleichzeitig hohen direkten Kinderkosten angesichts des geringen Einkommens(potentials) des Mannes. Eine paarbezogene Auswertung des Familiensurveys liefert ebenfalls Hinweise, die die NHE stützen, indem sie einen an die Frau gekoppelten negativen Opportunitätenkosteneffekt herausgestellt und parallel dazu einen positiven Einkommenseffekt des Mannes aufdeckt (Klein 2003: 518). Der maßgebliche Nachteil dieser Beiträge besteht jedoch darin, dass die Kin-

2 Erst jüngere, international etablierte demographische Surveys wie der *Generations and Gender Survey* beziehen auch systematisch Männer in die Datenerhebung ein, während ältere Großprojekte wie der *Demographic and Health Survey* ausschließlich Frauen befragen.

derkosten über das Bildungsniveau operationalisiert werden. Vergleichbare Arbeiten unter Verwendung subjektiv eingeschätzter Kinderkosten liegen meines Wissens nicht vor.

Soweit steht also eine adäquate Anwendung der NHE im Bereich des generativen Verhaltens aus. Als Schlussfolgerung aus der hier gesammelten Kritik müsste die zwischen Bildung und Geburtenverhalten vermittelnde Funktion der wahrgenommenen Kinderkosten im Rahmen einer Paaruntersuchung getestet werden. Wie einleitend vorweggenommen und im folgenden Kapitel näher ausgeführt, lässt sich auch mit den vorliegenden Daten keine Prüfung vornehmen, die alle soeben dargelegten Defizite gleichzeitig behebt. Mindestens aber kann eine erste empirische *Annäherung* an eine Analyse stattfinden, die insbesondere den beiden Hauptkritikpunkten der vorangegangenen Betrachtung Rechnung trägt. Es soll also in einem ersten Schritt geprüft werden, ob die wahrgenommenen Opportunitätskosten mit Zunahme des Bildungsniveaus der Frau steigen, während die direkten Kosten mit der Bildung des Mannes abnehmen. Anschließend ist zu testen, ob ein Zuwachs an wahrgenommenen Kinderkosten eine rückläufige Neigung des Paares zur Familiengründung nach sich zieht und inwiefern den Kinderkosten hierbei tatsächlich eine vermittelnde Funktion zwischen Bildung und Familiengründung zukommt.

4. Daten und Methode

Daten

Eine 2006 realisierte Teilstichprobe der PAIRFAM-Vorstudie findet für die folgenden Analysen Verwendung. Da in Ergänzung zur eigentlichen Befragungsperson auch deren Partner befragt wurde, konnte ein Teildatensatz heterosexueller Partnerschaften gewonnen werden. Die Stichprobe ist räumlich auf die vier Großstädte Bremen, Chemnitz, Mannheim und München beschränkt, innerhalb derer jeweils Zufallsstichproben von Befragten ausgewählter Geburtskohorten aus den städtischen Melderegistern gezogen wurden. In Anlehnung am bundesweiten durchschnittlichen Erstgebäralter wurden aus der Analyse Fälle ausgeschlossen, in denen mindestens einer der Partner nach 1980 geboren wurde sowie Partnerschaften, die erst im Beobachtungsjahr eingegangen wurden. Ferner fanden nur solche Paare Eingang in die Analysen, deren erstes Kind ein gemeinsames leibliches Kind ist. Für andere Formen der Familiengründung werden spezifische Entscheidungsmuster vermutet. So ist beispielsweise im Fall von Stiefkindern anzunehmen, dass die hier zur Prüfung stehenden Mechanismen insbesondere durch paarbildungsrelevante Entscheidungskriterien überlagert werden, weil die Entscheidung für ein Stiefkind im Allgemeinen an die Entscheidung für eine Partnerschaft gekoppelt ist. Es verbleiben 237 Paare, die die Geburtsjahre zwischen 1928 und 1980 abdecken sowie unterschiedliche Kinderzahlen, die innerhalb der betrachteten Partnerschaften realisiert worden sind: So sind 14% der Partnerschaften (noch) kinderlos, 25% haben ein Kind, 61% zwei Kinder oder mehr. Es wird deutlich, dass es sich um eine kleine und sehr selektive Stichprobe handelt, was allerdings einer Prüfung von Zusammenhangshypothesen insbesondere deshalb nicht grundsätzlich entgegen steht, weil die von der NHE behaupteten Thesen nicht auf bestimmte Bevölkerungssegmente beschränkt sind. Von einigem Nachteil ist hingegen der Querschnittscharakter der Erhebung: Ein Großteil der Paare hat den hier interes-

sierenden Übergang in die Elternschaft zum Messzeitpunkt bereits vollzogen. Zwar wurde dieser Zeitpunkt retrospektiv erfasst, Gleiches war jedoch nicht für die subjektive Kostenwahrnehmung möglich. Deshalb liegen die Kinderkosten für einen Teil der Paare erst nach der Erstgeburt vor, was zur Infragestellung ihrer Validität und der daran geknüpften Kausalzusammenhänge berechtigt. Gewisse nachträgliche Anpassungen der eingeschätzten Kinderkosten, etwa an das gezeigte Verhalten, an zwischenzeitlich gemachte Erfahrungen im Verlauf der eigenen Elternschaft oder sich gewandelte Rahmenbedingungen, sind ebenso wenig auszuschließen wie Alterseffekte. Auch wenn keine *systematischen* Verzerrungen in die eine oder andere Richtung erwartet werden, muss die Möglichkeit ihres grundsätzlichen Auftretens mindestens bei der Beurteilung der Ergebnisse Berücksichtigung finden.

Bildungsniveau

Das Bildungsniveau ist ein häufig zur Prüfung der NHE eingesetzter Indikator der Kinderkosten. Begründet durch eine enge Koppelung zwischen *beruflichem* Abschluss und dem Einkommen(spotential), kommt oft ein aus Schul- und Berufsbildung kombinierter Index zur Anwendung (Blossfeld/Huinink 1989; Blossfeld/Jänichen 1990; Brüderl/Klein 1993; Klein/Lauterbach 1994). Einer unzureichenden Erfassung des Berufsabschlusses geschuldet, der nicht für beide Partner vorliegt, muss Bildung in dieser Analyse über den höchsten erreichten *Schulbildungsabschluss* operationalisiert werden. Dieser bietet zumindest den Vorteil, dass er im Allgemeinen früh im Lebenslauf und typischerweise *vor* der Familiengründung erreicht wird, um anschließend weitgehend unverändert zu bleiben. Stellt man in Rechnung, dass alle Befragten 26 Jahre und älter sind und bereits über mindestens einen ersten allgemeinbildenden Schulabschluss verfügen, scheint eine empirische Modellierung des impliziten *Kausalzusammenhangs* zwischen Einkommen(spotential) und wahrgenommenen Kosten zulässig. Der Index weist vier Ausprägungen auf: Hauptschulabschluss, Realschulabschluss, Fachhochschulreife, Hochschulreife. Nur sehr wenige Befragte verfügen über keinen oder einen alternativen Abschluss. Diese Fälle gehen nicht in die Analysen ein. Die Verteilung zeigt, dass Befragte mit hohem Schulbildungsniveau, d.h. jenseits der Realschule, überproportional vertreten sind. Das trifft sowohl für Frauen (47%) als auch für Männer (52%) zu. Da das Einkommen(spotential) vor allem ab dem höchsten Bildungssegment deutlich anwachsen sollte, dürfte die Überrepräsentation dieser Befragten eher von Vorteil für die Zusammenhangsprüfungen sein.

Kosten von Kindern

In deutlicher Abgrenzung von der Konzeption im *Familienurvey*, zielte das hier eingesetzte Messinstrument auf keine allgemeine Erfassung der Nachteile ab, die typischerweise mit Kindern einhergehen. Vielmehr stand die Wahrnehmung der eigenen Betroffenheit hiervon im Vordergrund. In Anlehnung an das Instrumentarium der *Value of Children-Replikationsstudie* (Trommsdorff/Nauck 2005), wurde über eine Liste von Items die individuelle Relevanz verschiedener Kostenaspekte von Kindern erfragt. Unter Verwendung einer fünfstufigen Antwortskala, die von *sehr unproblematisch* (Wert 1) bis *sehr proble-*

matisch (Wert 5) reicht, sollte erfasst werden, wie stark vor dem Hintergrund der jeweils persönlichen Lebenslage, verschiedene negative Folgen von Elternschaft erwartet und wie problematisch sie für die jeweils angesprochenen Lebensbereiche eingeschätzt werden. Neben dem bereits diskutierten Nachteil, dass die Kosten nicht durchweg vor der Familiengründung erfragt wurden, sieht sich diese Art der Operationalisierung von Kinderkosten vor zwei weitere Herausforderungen gestellt: Erstens unterliegt die Messung einem höheren Risiko, von der Wirksamkeit unterschiedlicher Arten von Antworttendenzen betroffen zu sein. Zweitens bietet ihre Auswertung mehr Raum für die Interpretation dessen, was damit erfasst wird. Somit ist eine sorgfältige (Konstrukt-)Validierung entscheidend, um ein Mindestmaß an Zuverlässigkeit der Indikatoren zu gewährleisten. Mit diesem Ziel wurden zunächst die Kostenitems mit akzeptablen Verteilungen ausgewählt, um sie anschließend einer umfassenden Strukturprüfung zu unterziehen: Im Verlauf einer Reihe iterativer (schiefwinkliger) Faktoranalysen wurden weitere Items ausgeschlossen, sofern sie sich keiner der Kostendimensionen eindeutig zuordnen ließen. Dieses für Männer und Frauen getrennt durchgeführte Verfahren erbrachte für beide Geschlechter dieselbe Minimallösung, die die Grundlage der Indikatorbildung darstellt. Demnach werden die Opportunitätskosten über einen Mittelwertsindex, bestehend aus den folgenden Items, abgebildet: Wie problematisch ist es für Sie ganz persönlich, (i) *dass es schwierig ist Beruf und Familie zu vereinbaren*; (ii) *dass man wegen Kindern seinen Arbeitsplatz verlieren kann*; (iii) *dass man wegen Kindern seine beruflichen Ziele nicht erreichen kann*? Die interne Konsistenz erweist sich mit Alpha-Koeffizienten von 0,73 (Frauen) und 0,62 (Männer) als gut. Die direkten Kosten ergeben sich aus den beiden Items: (i) *dass man sich mit Kindern weniger leisten kann* und (ii) *dass durch Kinder weniger Geld für die eigene Altersvorsorge bleibt*. Die Korrelationen fallen mit $r=0,74$ (Frauen) und $r=0,83$ (Männer) hoch aus. Dass für Männer und Frauen vergleichbare Skalen mittlerer Qualität aufgefunden wurden, spricht für eine gewisse Validität der Messung.

Familiengründung

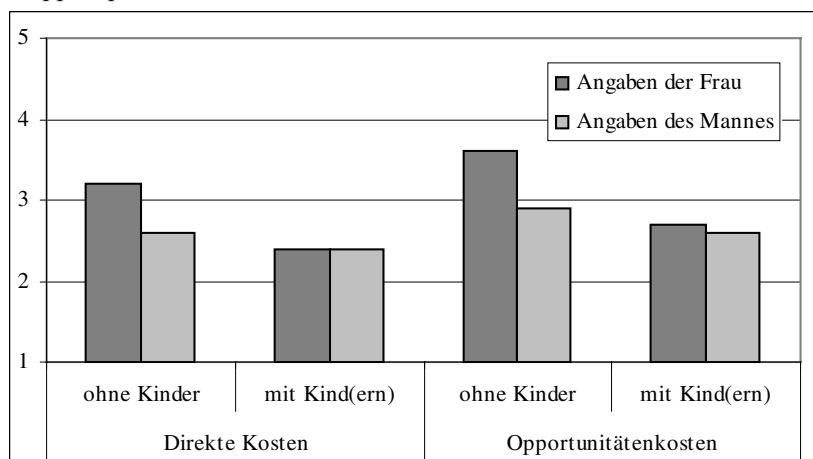
Von beiden Partnern wurden retrospektiv die Fertilitätsbiographien erfasst, so dass die Information zur Realisierung und zum Zeitpunkt der Geburt des ersten Kindes vorliegt. Angesichts nicht durchweg monatsgenauer Erfassung von Geburtsdaten muss sich auf jahresgenaue Informationen beschränkt werden. Da sich ein Teil der Paare noch in der reproduktiven Phase befindet, stellt sich die abhängige Variable entsprechend als rechtszensiert dar, weshalb ein ereignisanalytisches Verfahren zum Einsatz kommt. Der Übergang zum ersten Kind wird mittels einer modifizierten Version des log-logistischen Modells geschätzt (Brüderl/Diekmann 1995), dessen entscheidender Vorteil in einer Trennung unterschiedlicher Parameter des betrachteten Übergangs besteht. Diese Trennung ermöglicht die separate Schätzung potentieller Effekte der Kinderkosten auf drei Ausprägungen, die den Übergang zum ersten Kind beschreiben: Intensität, Lage auf der Zeitachse, sowie Form. Da die hier auf dem Prüfstein stehenden Thesen der NHE auf das Auftreten der Geburt abzielen (und weniger auf ihren Zeitpunkt), wird der Parameter geschätzt, der auf das *Risiko* einer Erstgeburt verweist (= Intensität).

5. Befunde

Kinderkosten aus Paarperspektive

Betrachtet man sich zunächst die Höhe der von den Befragten wahrgenommenen Kinderkosten, so zeigt sich, dass sie recht gering ausfallen, da die Mittelwerte beider Kostenaspekte überwiegend in der unteren Hälfte der Skala rangieren. Eine für Eltern und kinderlose Paare getrennte Darstellung (Abbildung 1) weist für die Paare die geringsten Kosten aus, die sich bereits für das erste Kind entschieden haben. Bei den (noch) Kinderlosen sind es vor allem die Opportunitätskosten, die sie deutlich höher bewerten und das trifft hauptsächlich auf die Einschätzungen der Frauen zu. Geschlechterunterschiede zeigen sich vor allem für (noch) kinderlose Befragte und zwar dergestalt, dass Frauen deutlich höhere Mittelwerte aufweisen als Männer. Geht man davon aus, dass diese Befunde nicht ausschließlich dadurch hervorgerufen werden, dass Kinderkosten systematisch abgewertet werden, nachdem sich ein Paar für die Elternschaft entschieden hat – etwa um die Entstehung von Dissonanz zu vermeiden – dann können diese Gruppenvergleiche durchaus im Sinne der NHE ausgelegt werden: Eine hohe Einstufung der Kinderkosten verhindert tendenziell die Familiengründung. Angesichts der Rechtszensierung der Familiengründung ist sogar von einer leichten Unterschätzung der Gruppenunterschiede auszugehen. Gegen die NHE würde jedoch sprechen, dass sich kinderlose Männer und solche, die bereits Kinder haben kaum in ihren Kostenangaben unterscheiden. Damit deutet sich ein scheinbar geringer Zusammenhang zwischen der Fertilität des Paares und den von Männern wahrgenommenen Kinderkosten an, der durch spätere Analysen bestätigt werden wird. Gleichzeitig schwächt diese Tendenz den Verdacht einer allgemeinen Abwertung der Kosten infolge der Geburt des ersten Kindes.

Abbildung 1: Gruppenspezifische mittlere Kinderkosten



Quelle: PAIRFAM Vorstudie 2006.

Diese präsentierten Mittelwerte werden um eine Betrachtung auf der Paarebene ergänzt, die nunmehr das Verhältnis zwischen konkreten Partnern aufdeckt: In Tabelle 1 sind hier-

zu die Verteilungen der Partner auf drei Gruppen partnerschaftlicher (Nicht-)Übereinstimmung ausgewiesen. Für die Zuordnung wurde die Differenz der jeweiligen Kostenindikatoren beider Partner berechnet, wobei das Paar als homogen eingestuft wurde, wenn sich die Differenz im Bereich der Standardabweichung bewegt. Insgesamt belegen die Befunde hohe Übereinstimmungen auf Paarebene, da die Kostenangaben beider Partner bei etwa zwei Drittel der Paare auf ähnlichem Niveau rangieren. Insbesondere die Übereinstimmung hinsichtlich der direkten finanziellen Kinderkosten kann als Indiz für die Richtigkeit der von der NHE behaupteten Haushaltsnutzenfunktion verstanden werden: Der Einschätzung der mit Kindern verbundenen finanziellen Aufwendungen scheint das *gemeinsame* Haushaltsbudget beider Partner zu Grunde zu liegen.

Tabelle 1: Ausmaß partnerschaftlicher Übereinstimmung der wahrgenommenen Kinderkosten

Relative Kosten	Prozentuale Anteile					
	Direkte Kosten			Opportunitätenkosten		
	Alle Paare	Paare ohne Kinder	Paare mit Kind(ern)	Alle Paare	Paare ohne Kinder	Paare mit Kind(ern)
Mann höher	16	12	16	11	6	12
Homogen	65	53	67	69	62	71
Frau höher	20	35	17	20	32	17
N	232	34	198	231	34	197

Quelle: PAIRFAM Vorstudie 2006.

Daneben bestätigt sich der Befund der Aggregatbetrachtung insofern, als auch innerhalb konkreter Partnerschaften Frauen tendenziell mehr Kosten angeben als Männer. Die Tabelle 1 weist höhere Anteile der Paare aus, in denen die von der Frau wahrgenommenen Kosten über denen ihres Mannes liegen (20%), als Paare mit umgekehrtem Verhältnis (direkte Kosten=16% bzw. Opportunitätenkosten=11%). Betrachtet man ausschließlich (noch) kinderlose Paare, so verstärkt sich diese Geschlechterdifferenz erheblich. Wie ist diese Beobachtung zu deuten? Dass sich das Ausmaß der Übereinstimmung zwischen Paaren mit und ohne Kind(ern) so offensichtlich und systematisch unterscheidet, lässt sich mit der NHE nicht in Einklang bringen. Vor allem die direkten Kinderkosten sollten von beiden Partnern ähnlich hoch wahrgenommen werden und zwar unabhängig von der Familienphase. Geht man also von annähernd validen Kostenmessungen aus, dann entkräftet dieser Befund die eben noch unterstützte Haushaltsnutzenfunktion. Jenseits der NHE lässt sich vermuten, dass neben der absoluten Höhe der Kosten, eine diesbezüglich nicht zwangsläufig gegebene Einigkeit beider Partner förderlich für den Übergang zur Elternschaft ist. Diese Überlegung ist durchaus plausibel, muss jedoch verworfen werden, da spätere (nicht abgedruckte) Analysen zeigen, dass der Übergang zur Elternschaft in keinem bedeutsamen Zusammenhang mit der (fehlenden) Homogamie der Kostenwahrnehmungen steht. Entsprechend wird auch eine zweite Alternativerklärung entkräftet, die an der Querschnittserfassung der Kinderkosten ansetzt und wonach die Wahrscheinlichkeit der Übereinstimmung beider Partner insbesondere mit der gemeinsamen Erfahrung mit eigenen Kindern steigt, da die tatsächlich auftretenden Kinderkosten nunmehr besser eingeschätzt werden können. Erklärungsbedürftig wäre bei einer solchen Auslegung ohne-

hin, warum dann vor allem Frauen ihre Kostenwahrnehmungen nach unten, hin zu ihren Partnern anpassen. Als Bilanz dieser deskriptiven Betrachtung ist eine, vor dem Hintergrund der NHE sehr gemischte Befundlage festzuhalten.

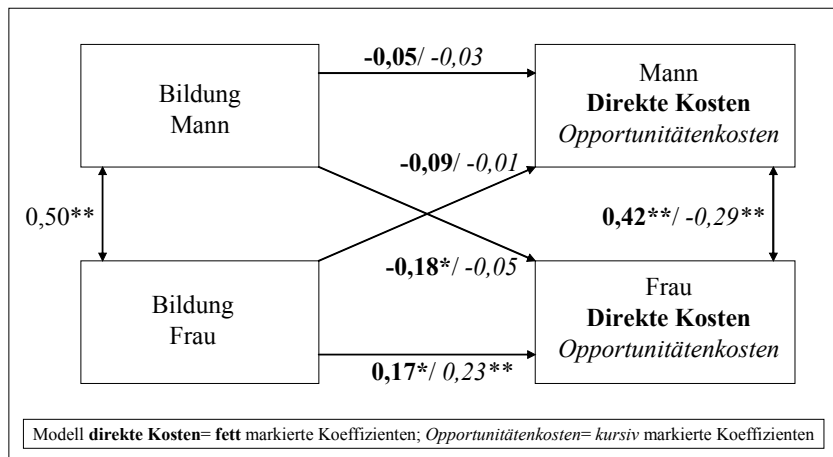
Bildungsniveau und Kinderkosten

Im nächsten Schritt wird untersucht, ob das Bildungsniveau beider Partner die wahrgenommenen Kinderkosten so abbildet, wie von der NHE behauptet. Hierzu wurde die dyadische Datenstruktur dem *actor-partner interdependence model* folgend analysiert (Kashy/Kenny 2000) – ein Vorgehen, das mögliche Abhängigkeiten zwischen beiden Partnern explizit berücksichtigt bzw. testet. Getrennt für beide Kostendimensionen wurden dyadische Pfadmodelle berechnet, die individuelle sowie Partnereffekte der Bildung auf die von beiden Partnern wahrgenommenen Kosten simultan überprüfen. Die Ergebnisse beider Modelle sind in der Abbildung 2 zusammengestellt, wobei standardisierte Beta-Koeffizienten bzw. Korrelationskoeffizienten sowie die zugehörigen Signifikanzen berichtet werden.

Zunächst soll das Modell zur Vorhersage der Opportunitätenkosten betrachtet werden (kursiv gekennzeichnet). Wie der NHE folgend zu erwarten ist, steigen die von der Frau wahrgenommenen Opportunitätenkosten mit der Höhe ihres formalen Schulabschlusses an. Allerdings ist der Koeffizient von sehr geringer Stärke ($\text{Beta}=0,23$; $p \leq 0,01$), wenn man bedenkt, dass die NHE das Bildungsniveau als geeignetes Proxy für die Kinderkosten versteht. Möglicherweise wird dieser Zusammenhang angesichts der dahinter stehenden und durchaus strittigen Zusatzannahme der Unvereinbarkeit von Erwerbs- und Familienarbeit unterschätzt. Diese Annahme ignoriert kontextspezifische Handlungsbedingungen, was insbesondere bei gesonderter Betrachtung von Ost- und Westdeutschland nicht haltbar scheint: Nach wie vor gestalten sich die Gelegenheitsstrukturen für institutionelle Kinderbetreuung in Ostdeutschland deutlich günstiger und entsprechend sollte der Zusammenhang zwischen Bildung und Opportunitätenkosten hier geringer ausfallen als in Westdeutschland, wo die Unvereinbarkeitsannahme besser greift. Dieser Überlegung konnte durch eine getrennte Berechnung des Modells der Abbildung 2 empirisch nachgegangen werden, erbrachte aber überraschenderweise eine leichte Tendenz *entgegen* der soeben formulierten Erwartung (Gesamtmodell nicht abgebildet): Der Effekt der Bildung der Frau auf die von ihr angegebenen Opportunitätenkosten liegt in Ostdeutschland ($\text{Beta}=0,30$; $p \leq 0,05$) etwas über dem in der westdeutschen Teilstichprobe ($\text{Beta}=0,20$; $p \leq 0,05$). Es mag sich nun die Vermutung aufdrängen, dass gerade die in Ostdeutschland in den letzten Jahren vorherrschende prekäre Arbeitsmarktlage, die insbesondere die Konkurrenzfähigkeit von Frauen mit Kind(ern) erheblich beeinträchtigt, vor allem bei höher gebildeten Frauen einen *allgemeinen Anstieg* der mit Kindern in Verbindung gebrachten Opportunitätenkosten bewirkt hat, also auch bei den Frauen, deren Familiengründung bereits einige Zeit zurückliegt. Das impliziert für ostdeutsche Frauen eine nachträgliche Anpassung der Kinderkosten an die sich veränderten ökonomischen Rahmenbedingungen, was sich konkret in einer Zunahme der von ihnen angegebenen Opportunitätenkosten äußern sollte. Diese Interpretation würde die Messung der Kinderkosten empfindlich in Frage stellen. Gegen sie sprechen allerdings zwei Befunde: Erstens fallen die um Geburtsjahr

und Bildungsniveau bereinigten Mittelwerte der von den ostdeutschen Frauen wahrgenommenen Opportunitätenkosten signifikant geringer aus, als die der in Westdeutschland lebenden Frauen (MW=2,7 gegenüber 3,0; $p \leq 0,05$). Zweitens legen (hier nicht abgedruckte) Analysen für Ostdeutschland keine schlechtere Vorhersage der Familiengründung durch die Opportunitätenkosten nahe als für Westdeutschland, vielmehr zeichnet sich eine geringfügige Tendenz entgegengesetzter Richtung ab. Angesichts unterschiedlicher Stichproben(größen) ist ein direkter Vergleich der Höhe der Koeffizienten aber ohnehin nicht empfehlenswert. Verlässlicher ist es, sich auf einen Vergleich der Signifikanzen zu beschränken und demnach verweisen die Koeffizienten beider Teile Deutschlands auf eine vergleichbare Erklärungsrelevanz. Im Prinzip sollte das auch bei der Bewertung der regionenspezifischen Zusammenhänge zwischen Bildung und Opportunitätenkosten beachtet werden und so gesehen unterscheiden sich auch diese Koeffizienten in beiden Teilstichproben nur marginal. Was allerdings bleibt ist ihre geringe Höhe. Ob aber angesichts des unbefriedigenden Indikators für das Bildungsniveau hieraus eine eingeschränkte Brauchbarkeit der Abbildung weiblicher Opportunitätenkosten über das Bildungsniveau geschlossen werden kann, ist hier nicht abschließend zu entscheiden. Zumindest erbringt diese Analyse ein Indiz *gegen* diese übliche Praxis.

Abbildung 2: Individuelle und Partnereffekte des Bildungsniveaus auf die Kosten von Kindern



Quelle: PAIRFAM Vorstudie 2006. Anmerkung: Simultane Prüfung der Bildungseffekte von Frau und Mann; N = 216; * $p \leq 0,05$; ** $p \leq 0,01$.

Dieser Eindruck wird durch das Modell der direkten Kinderkosten verstärkt (fett gekennzeichnet). Es zeigt zunächst einen signifikanten Partnereffekt für die direkten Kosten: Je höher das Bildungsniveau des Mannes ist, desto geringer fallen die direkten Kinderkosten aus, die dessen Partnerin wahrnimmt (Beta=-0,18; $p \leq 0,05$). Dieser Zusammenhang stützt die Annahme der NHE, wonach die für Kinder notwendigen monetären Ausgaben vor dem Hintergrund einer guten Einkommenssituation des Haushaltes, die im Wesentlichen

von der Erwerbstätigkeit des Mannes geprägt wird, weniger negativ wahrgenommen werden. Allerdings fällt auch hier – ähnlich dem soeben diskutierten Zusammenhang – der Koeffizient sehr gering aus, was nun einerseits wiederum als Unterschätzung infolge einer eingeschränkten Validität der Indikatoren verstanden werden kann. Andererseits können erneut Zweifel formuliert werden, ob sich über das Bildungsniveau tatsächlich in ausreichendem Maße Rückschlüsse auf die Kinderkosten ziehen lassen. Für empirische Analysen scheint es zumindest empfehlenswert weitere Merkmale einzubeziehen, die ebenfalls auf das erwerbsbezogene Humankapital verweisen und die im Allgemeinen auch in der ökonomischen Theorie thematisiert werden wie Umfang und Dauer der Erwerbstätigkeit, Berufserfahrung und die berufliche Stellung.

Zwei weitere Pfadkoeffizienten dieses Modells deuten eine gewisse Unvollständigkeit der NHE an: Erstens bleiben die seitens des Mannes angegebenen direkten Kosten von dessen Bildung weitgehend unberührt. Das widerspricht der *Haushaltsbetrachtung*, wonach die finanziellen Ressourcen beider Partner im Gesamthaushaltsbudget zusammenfließen und vor diesem Hintergrund die Wahrnehmungen beider Partner gleichermaßen beeinflussen. Zweitens steigen die von der Frau wahrgenommenen direkten Kosten mit ihrem eigenen Bildungsniveau an ($\text{Beta}=0,17$; $p \leq 0,05$). Vereinbar mit der NHE wäre allenfalls ein gemäß der Einkommenshypothese negativer Zusammenhang, wonach ein mit hoher Bildung einhergehendes hohes Einkommenspotential der Frau zumindest über eine Teilzeitbeschäftigung realisierbar ist und auf diese Weise ebenfalls zu einer Erhöhung des Haushaltsbudgets beiträgt. Dass dieser Effekt jedoch positiv ausfällt, könnte darauf hinweisen, dass mit steigendem Bildungsniveau der Frau auch ihr Anspruch an die Qualität der Kinder wächst, was angesichts eines höheren Investitionsbedarfes in deren Betreuung und Ausbildung wiederum den Preis pro Kind erhöht und damit auch die antizipierten Kinderkosten. Ein solcher Effekt wird in ähnlicher Weise auch von Becker diskutiert (Becker/Lewis 1973: 281), aber möglicherweise unterschätzt oder somit in der weiteren Argumentation nicht angemessen berücksichtigt. Sofern dieser Mechanismus tatsächlich zum Tragen kommt, wäre er aber auch für Männer erwartbar. Und vielleicht kommt er auch dort zur Wirkung, überlagert allerdings den eigentlich erwarteten negativen Effekt, woraus der gefundene Koeffizient nahe Null ($\text{Beta}=-0,05$) resultiert. Diese Befunde geben zu bedenken, Überlegungen aufzunehmen, die bereits in andere ökonomische Modelle Eingang gefunden haben (u.a. Leibenstein 1974: 472f.) und wonach an die Zugehörigkeit zu einer bestimmten Bildungs- und Einkommenschicht spezifische normative Erwartungen hinsichtlich der in Kinder zu tätigen Investitionen gekoppelt sind. In diesem Sinne kritisierte bereits Turchi (1975: 113), dass die NHE derlei „normative factors which may influence the cost of a child as perceived by prospective parents“ völlig außer Acht lässt. Ob nun die hier gefundenen Effekte wiederum dadurch forciert sind, dass der Bildungsindikator auf dem Schulabschluss basiert und die berufliche Bildung nicht einbezieht, muss erneut zu bedenken gegeben werden. Mindestens aber regen die Befunde an, die Notwendigkeit einer solchen Ergänzung der NHE in Betracht zu ziehen.

Verhaltensrelevanz von Bildungsniveau und Kinderkosten

Abschließend wurden die von beiden Partnern wahrgenommenen Kinderkosten auf ihre Erklärungskraft hinsichtlich des Übergangs zur Elternschaft untersucht. In Tabelle 2 sind die Übergangsraten zusammengestellt, wobei verschiedene Modelle berechnet wurden: Zunächst finden ausschließlich die geschlechtsspezifischen Kinderkosten Beachtung (Modell 1). Diese werden in den folgenden Modellen durch das Bildungsniveau ergänzt, um der Frage nachzugehen, ob ein primärer Einfluss des Bildungsniveaus auf die Fertilität tatsächlich über die Kosten vermittelt wird. Hierzu wird einem Vorgehen gefolgt, das Baron/Kenny (1996) zur Ermittlung von Mediatoreffekten vorgestellt haben: Nachdem die vorangegangenen Analysen bereits moderate Zusammenhänge zwischen Bildung und Kinderkosten belegt haben, ist nunmehr zu prüfen, ob erwartungskonforme Primäreffekte der Bildung auf die Familiengründung bestehen (Modelle 2a und 2b) und ob diese substantiell abnehmen, wenn die als Vermittler vermuteten Kinderkosten kontrolliert werden (Modelle 3a und 3b).

Als übergeordneter Befund des ersten Modells ist festzuhalten, dass die von den Frauen wahrgenommenen Kosten die Erklärung dominieren: Beide Kostenarten wirken sich signifikant nachteilig auf die Geburt des ersten Kindes aus. Dass vor allem die Opportunitätskosten der Frau die Familiengründung negativ beeinflussen ($\text{Exp}(B)=0,73$; $p \leq 0,01$) und nicht die des Mannes, stärkt die Annahme der NHE, dass diese Kosten hauptsächlich im Zusammenhang mit der Frau entstehen. Partiiell finden sich auch Hinweise für die Richtigkeit der Einkommenshypothese: Es zeigt sich wenigstens ein negativer Effekt der von der Frau eingeschätzten direkten Kinderkosten auf die Familiengründungseignung des Paares ($\text{Exp}(B)=0,74$; $p \leq 0,05$). Dass die von Männern mit Kindern in Verbindung gebrachten direkten Kosten ohne Einfluss auf die Wahrscheinlichkeit der Geburt eines ersten gemeinsamen Kindes bleiben, ist nicht nur mit Blick auf eine Bewertung der NHE ein höchst interessanter Befund – vorausgesetzt dahinter verbirgt sich keine, vor allem Männer betreffende fehlerhafte Kostenerfassung.

Tabelle 2: Determinanten des Übergangs zur Elternschaft

Prädiktoren	Exp(B) + Signifikanz				
	1	2a	2b	3a	3b
Direkte Kosten Mann	1,22		1,20		1,12
Opportunitätskosten Mann	0,87		0,81		0,83
Bildung Mann		0,78*	0,76**		
Direkte Kosten Frau	0,74 *		0,65**		0,75*
Opportunitätskosten Frau	0,73 **		0,81		0,79**
Bildung Frau				0,73**	0,79*
Pseudo-R ²	0,30	0,21	0,31	0,29	0,31
N Gesamt (Zensiert)	206 (30)				

Quelle: PAIRFAM Vorstudie 2006. Anmerkung: Ereignisanalyse nach generalisiertem log-logistischem Modell, Schätzung des Risikoparameters; * $p \leq 0,05$; ** $p \leq 0,01$.

Die nächsten Modelle liefern weitere aufschlussreiche Ergebnisse. Im mittleren Teil der Tabelle 2 wird die Prüfung der Einkommenshypothese vertieft. Gänzlich entgender

Erwartung tritt ein negativer Bildungseffekt des Mannes auf die Familiengründung hervor ($\text{Beta}=0,78$; $p\leq 0,05$). Gemäß der Einkommenshypothese wäre zu erwarten gewesen, dass mit steigendem Bildungsniveau des Mannes (und damit zunehmendem Einkommen des Paarhaushaltes) die Wahrscheinlichkeit der Kindergeburt steigt. Angesichts dieses Befundes erübrigt sich die Frage nach der Vermittlung dieses Effektes. Dennoch kann das Modell 2b ergänzen, dass der negative Einfluss, der von der Frau wahrgenommenen direkten Kosten unter Konstanzhaltung der Bildung ihres Mannes erhalten bleibt bzw. nunmehr sogar hoch signifikant ist ($\text{Exp}(B)=0,65$; $p\leq 0,01$). Dieses Ergebnis impliziert, dass die von der Frau wahrgenommenen direkten Kinderkosten *unabhängig* vom Bildungshintergrund ihres Partners gegen eine Familiengründung sprechen. Unter der Annahme einer korrekten Indikatorbildung ist das als bemerkenswertes Indiz gegen die Einkommenshypothese zu interpretieren. Nur etwas günstiger gestaltet sich die Befundlage mit Blick auf die Opportunitätenkostentheorie (Modelle 3). Zwar bestätigt sich zunächst ein erwarteter negativer Bildungseffekt: Mit steigendem Bildungsniveau der Frau nimmt die Wahrscheinlichkeit der Familiengründung ab ($\text{Beta}=0,73$; $p\leq 0,05$). Das Modell 3b verweist dann aber auf eine recht eingeschränkte Vermittlung dieses Effektes, da er unter Kontrolle der Kinderkosten nur wenig an Stärke verliert ($\text{Beta}=0,79$; $p\leq 0,05$), bei gleichzeitig hoch signifikantem, negativen Einfluss der Opportunitätenkosten der Frau ($\text{Beta}=0,79$; $p\leq 0,01$).

Zusammenfassend lassen sich also *verschiedene eigenständige Effekte* auf die Familiengründung festhalten – einerseits ausgehend von der Bildung beider Partner und andererseits ausgehend von den kindbezogenen Kosten, die von der Frau wahrgenommen werden. Überraschend ist die scheinbar weitgehende Unabhängigkeit beider Konzepte mit Blick auf die Erklärung des generativen Verhaltens. Es ist zu vermuten, dass diese zumindest teilweise auf eine unbefriedigende Erfassung des Bildungskonzeptes zurückgeht: Mit der Beschränkung auf die Schulbildung scheint die erwerbs- und einkommensbezogene Komponente dieses Konzeptes zu Gunsten alternativer Informationsanteile wie Lebenskonzepte, Einstellungen oder Ansprüche in den Hintergrund zu treten. Das erweist sich für die Prüfung der *einkommensbasierten* Argumentation der NHE als nachteilig und entsprechend bleiben aus diesen Analysen ableitbare Zweifel an der Gültigkeit der zentralen Thesen der NHE sehr vage. Aber selbst wenn es zutreffend ist, dass die hier gefundenen Bildungseffekte nur bedingt Einkommenseffekte widerspiegeln, würde das auf eine Schwäche der NHE hinweisen, da diese nicht vorsieht, dass mit zunehmendem Bildungsniveau die Familiengründungsneigung auch jenseits eines möglichen Einkommenseffektes abnimmt.

6. Zusammenfassung und Diskussion

Trotz offensichtlicher Nachteile des Stichprobendesigns und der Indikatorbildung bot sich angesichts der von beiden Partnern subjektiv eingeschätzten Kinderkosten die Möglichkeit, Argumenten der NHE empirisch nachzugehen, die bisher wenig Beachtung gefunden haben. Und in der Tat empfehlen die Ergebnisse, Prüfungen in dieser Richtung zu vertiefen, denn auch wenn einige der gefundenen Zusammenhänge im Sinne der NHE ausfallen, lassen sich ihre zentralen Annahmen empirisch kaum fundieren. Die noch stärkste Bestätigung erfährt die Opportunitätenkostentheorie. Gleichwohl fällt der für die Frau

negative, über ihre Opportunitätskosten vermittelte Bildungseffekt auf die Familiengründung sehr beschränkt aus. Auch für die oft stiefmütterlich behandelte Einkommenshypothese finden sich zwar zunächst insofern Anhaltspunkte, als die auf die Familiengründung negativ wirkenden direkten Kostenwahrnehmungen seitens der Frau mit steigendem Bildungsniveau ihres Partners zurückgehen. Allerdings können gerade die letzten Analysen die vermittelnde Position der direkten Kinderkosten zwischen Bildung und generativem Verhalten nicht bestätigen. Gegen die Einkommenshypothese spricht zudem, dass das Bildungsniveau teilweise positiv mit den direkten Kinderkosten zusammenhängt und auf diese Weise auch die Wahrscheinlichkeit einer Erstgeburt herabsetzt. Dieser Wirkungspfad existiert innerhalb der NHE nicht. Würde er sich in späteren Analysen bestätigen, dann wäre eine nicht unerhebliche Schlussfolgerung, dass die Geburtenneigung hoch gebildeter Frauen in zweifacher Hinsicht gemindert wird – einmal durch die bekannte Zunahme ihrer Opportunitätskosten und darüber hinaus durch einen Anstieg der von ihnen wahrgenommenen direkten Kinderkosten. Zudem deuten die Ergebnisse zumindest vage an, dass das Bildungsniveau nur bedingt als Indikator für Kinderkosten fungiert bzw. nur eingeschränkt über die Kinderkosten auf das generative Verhalten Einfluss nimmt.

Ebenfalls als erwartungskonträr erweist sich die ausschließliche Verhaltensrelevanz der Kostenwahrnehmung der Frau. Dieses Ergebnis schwächt die von der NHE unterstellte Annahme gemeinsam getroffener Haushaltsentscheidungen nach dem Grundsatz der maximalen Haushaltsnutzenproduktion erheblich, der zufolge die von beiden Partnern wahrgenommenen Kosten in vergleichbarem Umfang die Familiengründung determinieren sollten. Somit entsteht eine Erklärungslücke, die zu schließen es bedarf. Vielversprechend hierfür scheint eine weiterführende Auswertung getrennt nach der partnerschaftlichen Bildungskonstellation, um so festzustellen, ob bereits vorgelegte, verhandlungstheoretische Erweiterungen der NHE (u.a. Ott 1989) zu realistischeren Annahmen und besseren Erklärungen führen. Wird das durchschnittlich hohe Bildungsniveau der in diesem Datensatz enthaltenen Frauen in Erinnerung gerufen, so könnte man ihnen in diesem Sinne eine grundsätzlich sehr gute Verhandlungsposition gegenüber ihren Partnern unterstellen. Das wiederum sollte sie dazu befähigen, ihre Interessen bei der generativen Entscheidung besser durchzusetzen. Leider konnte in Anbetracht der geringen Fallzahl dieser Überlegung empirisch nicht nachgegangen werden.

Eine praktische Konsequenz, die aus dem Befund der ausschließlichen Erklärungskraft weiblicher Kosten resultieren könnte, wäre die lange Zeit übliche und nunmehr empirisch legitimierte Beschränkung auf die Perspektive der Frau. Entkräftet wird ein solcher Vorschlag jedoch dadurch, dass auch die Bildung des Mannes die Familiengründung jenseits ökonomischer Kinderkosten zu beeinflussen scheint. Denkbare Begründungen hierfür wären nicht ohne weiteres aus der NHE ableitbar. Das sich dadurch abzeichnende Erklärungsdefizit könnte möglicherweise durch die Berücksichtigung von Nutzen bzw. Vorteilen, die mit Kindern einhergehen, beseitigt werden. Becker selbst bringt mit Kindern sowohl einen Konsum- als auch einen Produktionsnutzen in Verbindung (1960: 210), verfolgt beide aber nicht weiter bzw. behauptet, sie seien konstant. In der *Value of Children*-Forschung werden qualitativ unterschiedliche Nutzenaspekte von Kindern nicht nur theoretisch hergeleitet, sondern auch systematisch mit den individuell wahrgenommenen Handlungsbedingungen und dem generativen Verhalten verbunden (Nauck 2001). Ein steigendes Bildungsniveau impliziert in diesem Erklärungszusammenhang einen allge-

meinen Rückgang des Nutzens von Kindern – ein Zusammenhang der dazu beitragen könnte, negative Bildungseffekte auf die Fertilität weiter aufzulösen.

Schließlich sind trotz der benannten Vorteile auch Beschränkungen der verwendeten Daten nicht von der Hand zu weisen, die die Aussagekraft der Befunde schmälern. Wie bereits erwähnt, ist die Stichprobe sehr klein und auf die städtische Bevölkerung begrenzt, was zumindest eine Wiederholung dieser Analysen auf breiter Datenbasis empfiehlt. An verschiedenen Stellen der Untersuchung deutet sich eine eingeschränkte Brauchbarkeit des hier verwendeten Bildungsindikators zur Abbildung einkommensbezogener Ressourcen an. Deshalb können daran geknüpfte Befunde lediglich als Arbeitshypothesen für weiterführende Untersuchungen dienen. Außerdem stehen auf Grund des Querschnittsdesigns der Stichprobe die Kostenwahrnehmungen von Befragten mit Kind(ern) lediglich für die Zeit nach der Erstgeburt zur Verfügung. Das beeinträchtigt die Gültigkeit ihrer Messung insbesondere dann, wenn Abhängigkeiten von der jeweiligen Lebens- bzw. Familienphase bestehen, in der sich der Befragte zum Befragungszeitpunkt befindet. Zumindest lassen sich weder theoretische Anhaltspunkte noch empirische Befunde für systematische oder substantielle Verzerrungen dieser Art finden, weshalb maximal eine Unterschätzung der aufgefundenen Effekte geschlussfolgert wird. Dennoch ist evident: Nur „panel data in which perceived costs and rewards of children are measured before the actual behaviour occurs can be used to study the causal impact of costs and rewards on actual decisions on childbearing“ (Liefbroer 2005: 368). Dementsprechend können die aus den Analysen gezogenen Schlussfolgerungen nur als erste Indizien betrachtet werden, die unter Verwendung prospektiv gewonnener Längsschnittdaten größeren Umfangs zu replizieren sind. Das aber bedeutet, dass entsprechende Daten zunächst erhoben werden, denn diesbezüglich ist für die Forschung im deutschsprachigen Raum erheblicher Nachholbedarf festzustellen.

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***ifb*-Mitteilungen**

Das Staatsinstitut für Familienforschung an der Universität Bamberg (*ifb*) berichtet an dieser Stelle in loser Folge über aktuelle Forschungsprojekte, neue Forschungsvorhaben, Tagungen und Veröffentlichungen.

***ifb*-Familienreport – Familien im internationalen Vergleich**

Der vierte Familienreport des *ifb* widmet sich dem Thema Familie auf europäischer Ebene. Dabei werden verschiedene Inhalte aufgegriffen. Zunächst gibt der Report einen Überblick über die demographischen Daten in den Ländern der EU-27. Zielsetzung dieses Kapitels ist es, anhand von Daten der amtlichen Statistik Gemeinsamkeiten, aber auch Unterschiede der Familienhaushalte innerhalb der EU-Länder aufzuzeigen. Dabei wird sowohl die aktuelle Situation als auch die Entwicklung in der Vergangenheit dargelegt. Neben den Informationen auf nationaler Ebene werden stets auch die bayerischen Daten diskutiert.

Die Einwohner der EU-27 verteilen sich auf etwa 195 Millionen Privathaushalte, wobei in nur jedem dritten Haushalt Kinder leben. Der seit langem in vielen europäischen Ländern zu beobachtende Geburtenrückgang hat auch Auswirkungen auf die Familiengröße. Auf der einen Seite bleiben immer mehr Frauen und Männer kinderlos, auf der anderen Seite nimmt der Anteil kinderreicher Familien (mit drei oder mehr Kindern) ab. Ihr Anteil an allen Familienhaushalten liegt EU-weit bei 12,9 Prozent. Die meisten kinderreichen Familien gibt es, relativ gesehen, in Zypern und Finnland, dicht gefolgt von den Benelux-Staaten, Großbritannien und Frankreich. In den Mittelmeerländern Portugal, Italien und Spanien ist ihr Anteil deutlich unterdurchschnittlich, ebenso in Bulgarien und der Tschechischen Republik. In vielen europäischen Ländern zeigt sich dabei auch eine zunehmende Differenzierung von familialen Lebensformen.

Das zweite Kapitel widmet sich den institutionellen Rahmenbedingungen von Familien in den EU-Mitgliedsstaaten. Hier wird insbesondere auf die jeweilige Ausgestaltung der zentralen familienpolitischen Instrumente wie Mutterschutz und Elternzeit, Geburtsbeihilfen, Kinder- und Betreuungsgeld sowie auf Kinderbetreuungsangebote und die steuerliche Behandlung von Familieneinkommen eingegangen. Historisch gesehen setzten sich die einzelnen Nationalstaaten in Europa in Abhängigkeit von ihren spezifischen

kulturellen und ökonomischen Bedingungen sehr unterschiedliche Ziele für ihre Familienpolitik. So gibt es bis in die Gegenwart hinein neben Ländern, in denen Familie Privatsache und Familienpolitik dementsprechend wenig ausgeprägt ist, Staaten, die eine aktive und ausgabenintensive Familienpolitik mit expliziten Zielen wie Gleichberechtigung der Geschlechter oder Förderung des generativen Verhaltens betreiben. Tanja Mühling stellt dar, inwiefern die Zielgruppen, Leistungen und Wirkungen der familienpolitischen Maßnahmebündel zwischen den Ländern und Ländergruppen variieren.

Ein weiteres Thema des Reports ist das Verhältnis von Elternschaft und Erwerbstätigkeit im internationalen Vergleich. Einführend wird ein Überblick über die verschiedenen institutionellen Rahmenbedingungen für die Vereinbarkeit von Familie und Erwerbstätigkeit in den europäischen Ländern gegeben. Dabei geht der Autor insbesondere auf die Angebote der betrieblichen Unterstützungsleistungen und die unterschiedlichen Zugänge zum Arbeitsmarkt ein. Anschließend wird der Frage nachgegangen, wie die Erwerbstätigkeitsmuster von Männern und Frauen in verschiedenen Ländern verlaufen und inwiefern sich abweichende Verlaufsmuster auf unterschiedliche arbeitsmarkt- und familienpolitische Ansätze zurückführen lassen.

In Deutschland werden Kinder in der öffentlichen Diskussion häufig als Kostenfaktor oder sogar als Armutrisiko thematisiert. In Kapitel 4 wird daher die finanzielle Situation der Familien in Deutschland mit der materiellen Lage von Familien in verschiedenen Ländern der EU verglichen. Marco Härpfer analysiert hierzu u.a. die Einkommensverteilung der Familien, ihre Betroffenheit von relativer Einkommensarmut sowie die Relevanz verschiedener Einkommensquellen für den Lebensunterhalt. Weitere Dimensionen der sozio-ökonomischen Situation von Familien, die in diesem Kapitel ausführlich dargestellt werden, sind Merkmale der Wohnverhältnisse von Familien und ihre finanzielle Belastung im Hinblick auf Zahlungsrückstände.

Chancengleichheit zwischen Frauen und Männern ist ein zentrales Ziel europäischer Politik, jedoch fallen die Erwerbsbeteiligung von Müttern und die innerfamiliäre Arbeitsteilung in den verschiedenen EU-Mitgliedsländern nach wie vor sehr unterschiedlich aus. Verantwortlich dafür sind neben strukturellen Unterschieden auch sozial-historische Hintergründe und normative Rollen- und Familienleitbilder. Zielsetzung des fünften Kapitels ist es, die Gemeinsamkeiten und Unterschiede in den Einstellungen zu Rollenbildern (traditionell versus modern) und zur innerfamiliären Arbeitsteilung innerhalb der EU aufzuzeigen. Die Autorinnen stellen dar, wie sich diese Einstellungen und Werthaltungen verändert haben und inwieweit in den einzelnen Ländern zwischen modernisierten Rollenbildern und tatsächlicher Arbeitsteilung Diskrepanzen bestehen.

In Kapitel 6 werden neben einigen gängigen Indikatoren zur Erfassung der demografischen und sozio-ökonomischen Rahmenbedingungen des Generationenverhältnisses vor allem Befunde diskutiert, die auf der Analyse von Austauschprozessen innerhalb der Familien basieren. Christopher Schmidt, Marcel Raab und Michael Ruland konzentrieren sich dabei auf den intergenerationalen Austausch von alltäglichen Unterstützungsleistungen zwischen Angehörigen der Altersgruppe der über 50-Jährigen und deren erwachsenen Kindern im europäischen Vergleich. Auf der einen Seite werden von den Älteren in Anspruch genommene Hilfen in den Bereichen Pflege, Haushalt und Verwaltungsaufgaben dargestellt. Auf der anderen Seite werden die Unterstützungsleistungen analysiert, welche die ältere Generation für die Betreuung von Enkelkindern sowie als Hilfeleistungen für

die erwachsenen Kinder erbringt. Die länderspezifischen Unterschiede in Bezug auf den Anteil der Hilfeleistenden und den Umfang dieser innerfamilialen Unterstützung werden vor dem Hintergrund der Ausgestaltung der einzelnen Wohlfahrtsstaaten interpretiert.

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