Does exogamy increase the risk of separation?
The impact of cultural dissimilarity on partnership dissolutions in Sweden 1990-2005

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Abstract

In this paper the connection between exogamy and partnership dissolution is analyzed using individual level register data for natives and immigrants moving to Sweden after 1968. We study both formally married and cohabiting unions, from the birth of the first child until dissolution of the partnership. Using event history models we study the impact of type of union (endogamous, exogamous with a native, exogamous with another immigrant) and cultural dissimilarity between the spouses (based on country of origin specific information on value system and majority religion) on dissolution, controlling for standard human capital and demographic characteristics of the spouses. Our main hypotheses are that exogamy increases dissolution risks, and that this effect increases with a greater cultural dissimilarity between the spouses. The results have implications not only for our understanding of union dissolution but also for the societal integration of immigrants in Western societies, and the role of union formation and partner selection in this process.

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Introduction

Intermarriage (exogamy with a native) has for long been seen as a key indicator of immigrant integration. Previous research has stressed the importance of human capital for the likelihood of intermarriage (e.g. Alba & Golden 1986; Dribe and Lundh 2008; Furtado 2006; Kalmijn 1998). However, also after controlling for these factors there remains large differences in intermarriage propensities between immigrants from different origins, which seems to be related to the degree of cultural dissimilarity between these immigrant groups and natives (Dribe and Lundh 2010, forthcoming).

The process of integration includes acculturation and structural integration and is according to assimilation theory completed when there are no perceived differences between the immigrant and native groups (Alba and Nee 2003). However, it could be assumed that in most existing mixed marriages the involved parties and their families perceive socioeconomic and/or cultural differences in some respects, reflecting differences in values and behavioral boundaries. These differences not only make mixed unions more complicated to arrange, they can also be expected to increase the risk of divorce. Moreover, it could be assumed that the greater the cultural distance between the spouses, the bigger the tension and stress in day-to-day life arrangements.

The effect of exogamy, or heterogamy, on marital satisfaction and divorce risks more generally has been studied for a range of individual characteristics, for instance education (Tynes 1990), socioeconomic status (Glenn et al. 1974; Jalovaara 2003; Ono 1998; Tzeng 1992), religion (Lehrer and Chiswick 1993), ethnicity (Jones 1996) and race (Goldstein and Harknett 2002; Fu and Wolfinger 2009). The standard hypothesis in the literature is that exogamous marriages are less stable than endogamous ones. Several American studies of the effects of religious and ethnic exogamy on marital stability also give a moderate support for this idea (Bumpass and Sweet 1972; Becker, Landes and Michael 1977; Michael 1979; Lehrer 1996).

Most studies of religious and ethnic exogamy have been done in the United States on descendants of previous immigrants rather than on recently arrived immigrants. Much less research has been done in Europe on the effects of religious or ethnic exogamy on marital stability. To our knowledge only a few studies exist, such as Finnäs (1997) on linguistic exogamy in Finland, and Kalmijn, de Graaf and Janssen (2005) on religious and nationality exogamy in the Netherlands. This apparent lack of knowledge calls for much more research on European contexts, which are often characterized by high immigration rates and difficulties in societal integration of large immigrant groups (see Rotte and Stein 2002; Zimmerman 2005 for an overview).

In this paper we study the impact of country-of-origin exogamy on separation risks of native Swedes and immigrants who came to Sweden as adults. Besides studying the overall connection between exogamy and partnership stability, we also analyze the importance of cultural dissimilarity between the spouses for the risk of separation, controlling for standard human capital characteristics, using country level data on values and dominant religion. Because of the high frequency of non-marital cohabitation we define first partnerships from the time of the first birth and follow these unions until dissolution (or censoring). This implies that we have information for both formally married and non-marital unions. We look at the period from 1990 to 2005 for which we have data for 138 unique immigrant groups as well as natives in the birth cohorts 1942-1989.

Theoretical background and hypotheses

The increase of union disruptions in the Western world since the 1950s is part of a larger transformation of family and household relations related to the process of modernization, including the increase in women's educational attainment and labor force participation, the development of welfare state arrangements that offer alternative economic security, and increasing urbanization and mobility that weaken family ties and social control. Also the modernization process includes a change in attitudes and norms from the traditional towards secularism, self-expression and individualization (Blossfeld and Müller 2003). Rising divorce and changing value systems are also crucial aspects of the Second Demographic Transition, which started in northern Europe in the 1960s and is now spreading across the world (van de Kaa 1987, 2002; Lesthaeghe and Neidert 2006).

International comparisons indicate that divorce rates vary a lot across countries and continents, with the highest rates in the Western world and the previously Communist Eastern Europe and much lower rates in Asia, Africa and Latin America (with a few exceptions). These differences could to a large extent be connected to variations in value systems and the degree of modernization. Variations within this main pattern could to some extent be attributed to differences in the welfare regimes (Blossfeld and Müller 2003). Empirical findings of differences in the risk of separation between different immigrant groups with regard to religion or country of birth indicate differences in values and preferences for union disruption (Kalmijn, de Graaf and Janssen 2005).

Theoretically, the individual decision to break up a union could be explained by the decline in the gains of being in the union and the presence of tensions and external shocks (Esser 2002; Becker 1991; Blossfeldt and Müller 2003). The individual considers the costs and benefits of a potential separation and calculates the net gains. In general there are three broad sets of determinants of divorce commonly identified in the literature: non-specialization, independence and dissimilarity.

Household specialization is the most common explanation of marriage and divorce in economics and goes back to early writings of New Home Economics (Becker, Landes and Michael 1977; Becker 1991). The simple idea here is that the main advantage of marriage is the possibilities of division of labor between the spouses. If spouses specialize according to their comparative advantages household productivity will be maximized and so will joint utility. Because of initial productivity differentials in market and housework connected to biological differences connected to child birth, specialization will normally result in men allocating most of their time to market work and women to housework. Since this arrangement supposedly is beneficial for both spouses, union disruption tends to lower utility for both husband and wife. Following this line of thought, the change from a male-breadwinner model to a two-earner model in many Western countries since the 1960s has been seen as a major explanation for increasing divorce rates, because it has lowered the gains to marriage for both spouses (e.g. Becker 1991; Blossfeld and Müller 2003).

The specialization approach has been criticized for its focus on relative female/male wages rather than on male *plus* female wages, i.e. the total household income. A higher total income may counter-balance the decline in specialization gains caused by female labor force participation (Moffitt 2000; Oppenheimer 1997).

An alternative to the specialization model is *the dependency model* (Nock 1995a). The main idea is that economic dependency fosters union commitment and stability, and accordingly greater female independence increase divorce risks. Union dissolution rates are highest when earnings are equal between the partners, because at that point the degree of dependence is at a minimum. Previous research, however, has only partly supported these predictions (Ono 1998). As stressed by Oppenheimer (1997) this is to a large extent connected to the change from one-earner to two-earner models in many Western countries. Such a change implies that gains to marriage are not necessarily declining with increased spousal income equality.

Though different in many ways, both the specialization and the dependence approach assumes a linear or inverted U-shaped relation between female labor force participation, including female income, and union dissolution. Higher female income, especially equal financial contributions of spouses, could be assumed to increase the risk of separation because of lower specialization gains to marriage. However, because the degree of female autonomy differs greatly across the world, women in many immigrants groups originate in countries where female labor force participation, and thus female economic independence, is quite unusual. It seems reasonable to assume that the values of these immigrant groups differ considerably from most Western standards in terms of attitudes to gender equality, traditional division of household labor, etc.

Consequently, exogamy between natives and immigrants may have different meanings for men and women. For example, a native man could, by marrying an immigrant wife with traditional values regarding household division of labor, increase the specialization gains from the union compared to an endogamous match in which the wife would be more likely to work. The increasing possibilities of match making via commercial marriage agencies, non-commercial websites, business and leisure travels, studies abroad, etc. has increasingly made it easier for native men who prefer traditional gender roles to seek women from countries with traditional values in terms of male authority and household division of labor (Niedomysl, Öst and van Ham 2009). According to the arguments above, such unions could be seen as the products of an exchange of socioeconomic status and income security on the part of the native man and the specialization on household work on the part of the immigrant woman.

For the native woman, it would obviously be different as she normally would want to work and expect mutual contribution to the household economy. Thus, there would not be any specialization gains in an exogamous union compared to an endogamous one, when looking from the point of view of a native woman. Moreover, the fact that immigrant men generally have a weaker attachment to the labor market and earn less on average than natives (e.g., Bengtsson, Lundh and Scott 2005) implies that it is likely that total household income would be lower in exogamous unions.

A third explanation of union disruption is that *dissimilarity* between spouses, e.g. with regard to education (heterogamy), religion or ethnicity (exogamy), increases the separation risk since they are correlated with differences in values, tastes and communication styles (Glen et al. 1974; Kalmijn 1998; Kalmijn, de Graaf and Poortman 2004; Kalmijn, de Graaf and Janssen 2005; Tynes 1990). This explanation can be linked to social-psychological theories that similarity between partners is highly valued and positively related to partnership quality (e.g. Antill 1983; Kurdek and Schmitt 1984). In dissimilar unions the number of joint activities is reduced, as is the degree of mutual confirmation of values. Also such differences make it more difficult for the parties to understand each other, which is of great importance especially when the union is under external pressure. Consequently, it has been argued that the more

dissimilar are two groups in values, the higher the risk of separation. Furthermore, mixed unions often have less support from family and social networks than endogamous unions, since they imply the crossing of group boundaries and breaking of group norms. Especially when the relationship is troubled, the lack of such support may be important. The stronger the social boundary between groups, for instance for historical reasons (compare Catholics and Protestants), the higher is the separation risk for such unions.

Previous research has sought confirmation of this exogamy hypothesis by comparing divorce risks of exogamous and endogamous unions and often found that exogamous unions indeed have higher risks of divorce. However, such an effect could be an artifact of a convergence in divorce risks of mixing individuals from backgrounds with different divorce traditions (Jones 1994, 1996). Thus *the convergence hypothesis* takes its departure in the observations of convergence across immigrant groups during the assimilation process and differences between cultures and religions in attitudes towards marriage, family and divorce. Differences in separation rates among exogamous partners from different immigrant groups simply reflect the variation in cultural norms. The convergence hypothesis predicts that the separation risk among partners from different ethnic backgrounds is a by-product of differences in group norms. The risk of dissolution of a specific type of mixed union is the average of the group level separation risks of the involved parties. Jones found empirical support for this hypothesis for immigrant intermarriage in Australia (Jones 1994) as well as for ethnic intermarriage in Hawaii (Jones 1996). Similarly, Finnäs (1997) found this kind of convergence to be important in understanding divorce differentials according to language exogamy in Finland.

In this paper the focus is on the influence of exogamy on the risks of separation for native Swedes and immigrants who came to Sweden as adults. In particular, we study the overall connection between exogamy and partnership stability and the importance of cultural distance between the spouses for the risk of separation. Based on the theoretical discussion above we set up three main hypotheses.

First, exogamy increases the risk of separation for both immigrants and natives (*the exogamy hypothesis*). Dissimilarity between the partners with regard to values, tastes and communication has a negative effect on the stability of the union, as it can be expected to increase tensions and make it more difficult to deal with difficulties in the partnership. Also the level of support from family and social networks could be expected to be lower in exogamous unions, which would further destabilize these unions. Consequently, we expect exogamous unions to be less stable than endogamous ones, both for natives and immigrants.

Second, a greater cultural dissimilarity between the partners, for example in terms of values or religion, reinforces the exogamy effect (*the cultural dissimilarity hypothesis*). Tension to the union is stronger when the distance with respect to faith, values, tastes, etc. between the partners is larger, and the support from family or kin is correspondingly lesser for similar reasons. Consequently, we expect separation risks to be higher for unions where the degree of cultural dissimilarity between spouses is greater.

Third, the effects on separation of exogamy and cultural dissimilarity between spouses are different for men and women (*the gender difference hypothesis*). There are big differences between natives and immigrants (as between different immigrant groups) in the values related to gender roles and female labor force participation. Such differences concerning the value of female housework vs. market work may in some cases stimulate exogamy, which in turn

makes the effects of exogamy and cultural dissimilarity on the risk of union dissolution different for men and women. Consequently, we expect the negative effects to be larger for unions between an immigrant husband and a native wife than for unions between a native husband and an immigrant wife.

In testing these hypotheses it is vital to control for variables measuring specialization and dependency as these factors can be assumed to differ a great deal between endogamous and exogamous unions, and also according to cultural distance.

Data and methods

We use data from the Swedish population registers maintained by Statistics Sweden. From a dataset consisting of all individuals in the birth cohorts 1942–89, who resided in Sweden at any time from 1961 onwards, we select natives (Swedish born) and immigrants (foreign born) first entering Sweden after the age of 15 and who came after 1967 and follow them from first partnership until separation or until they are censored because of out-migration, death, or the end of the study period. Partnership is defined as having a common child, regardless of being formally married or not. Because of the high frequency of non-marital cohabitation in Sweden, both before and after first birth (e.g. Kiernan 2004), this is a more relevant indicator of a serious partnership than looking only at the more selective group of formally married. We only limit the analysis to first partnerships, i.e. partnerships in which it is the first child for both spouses.

We study the period 1990-2005 for which we have full information on income, education, municipality as well as basic demographic measures such as children, country of birth, etc. We have information on country of birth for a total of 140 different immigrant groups, while immigrant groups below 100 individuals are gathered in 7 residuary groups. In the analysis we exclude the small number of immigrants belonging to these 7 residuary groups because it is impossible to decide whether or not the marriage was endogamous. We also exclude immigrants from Cuba and Myanmar because we lack information on crucial variables (values), leaving 138 individual countries of origin in the analysis.

Split-up of countries (e.g. the Soviet Union or Yugoslavia) or mergers of previously independent countries (e.g. East and West Germany) forced us to adjust the country grouping to create as coherent units of analysis as possible. Because a majority of immigrants from the Soviet Union came from Russia we include the former in the category ‘Russia’ while all independent states in the former Soviet Union are kept separate, such as the Baltic countries, Ukraine, etc. With regards to the former Yugoslavia, it is included with Serbia-Montenegro, while Bosnia-Herzegovina, Macedonia, Slovenia and Croatia are kept separate. It should be noted that it has been possible for immigrants from the former Yugoslavia who arrived before the split-up to change their record of country of birth in the population register afterwards, which a considerable number have chosen to do (see Dribe and Lundh, 2008). Czechoslovakia is merged with the Czech Republic, keeping Slovakia separate. In the case of merging, countries are kept together for the whole period (i.e. East and West Germany to Germany, North and South Vietnam to Vietnam). Finally Palestine, the West Bank and Gaza have been merged into a single unit called Palestine. In total we have about 400,000 observations each for immigrant men and women and about 3 million observations each for native men and women. Corresponding to these observations we have about 10,000 separations each in the immigrant samples and 70,000 each in the native samples (see Table 1).

Table 1 here

As many of the variables in the registers are only available annually, a dataset has been constructed with one observation per year for each individual. Hence, we use discrete-time event history analysis, estimating a series of complementary log-log models with partnership duration as a control variable. The dependent variable is binary, indicating whether or not the union was dissolved during the year of observation. All time-varying covariates refer to January 1 of the observation year. The variables of main interest are partnership type, values and religion. We define partnership type for immigrants in three categories: endogamy (being married to someone from the same country of origin), exogamy with a native (marrying a Swedish born), and exogamy with others (marrying another foreign born from a different country of origin). Naturally, for natives we only distinguish between endogamous and exogamous unions.

Values and religion are measured at the country-of-origin level, and not at the individual level, because this is the only information available in the registers. Individual level measures would of course have been more precise, not least since immigration is selective and immigrants to a varying degree deviate from the average population of the home country. Nonetheless, we believe that the cultural features of the sending country provide valuable information reflecting the basic differences between immigrant groups and the native population.

To indicate the value system in the country of origin, we use two indexes developed by Inglehart (1997) to measure values along two dimensions. The traditional-secular/rational value dimension reflects the difference between societies in which religion is very important and those in which it is not. More specifically, traditional values implies an emphasis on parent-child ties, authority, high levels of national pride and a nationalistic outlook, traditional family values and absolute standards, as well as the rejection of abortion, euthanasia, suicide and divorce. Societies closer to the secular/rational pole emphasize the opposite values. The survival-self-expression dimension reflects the difference between societies in which much emphasis is put on economic and personal security and societies in which survival is taken for granted and values on subjective well-being, self-expression and quality in life are more important. Societies near the survival pole emphasize the priority of economic and physical security over subjective well-being, self-expression and quality of life. Linked are little support for gender equality, low levels of political engagement or trust in other people, and negative attitudes towards homosexuals, foreigners, and people with AIDS or criminal records. Societies near the self-expression poles emphasize the opposite values (see Ingelhart and Welzel 2005).

The indexes were constructed using data from the World Values Survey, which has been undertaken in five waves centered in the years of 1981, 1990, 1995, 2000 and 2006. Respondents in about 100 countries have been answering questions on beliefs and values in at least one of the survey waves. The indexes were constructed from the answers to 10 questions that were similar in all surveys and that are highly correlated to the answers to a broader set of questions (see Ingelhart and Welzel 2005). The index scales on both dimensions range from about -2 to +2. No country is in the center position on both dimensions. Georgia is close to 0 on the traditional-rational dimension while Thailand and Malta have a similar position on the survival-self-expression dimension. Sweden is an outlier on both dimensions, close to the poles of secular/rational values (similar to Germany) and self-expression values (similar to the Netherlands and Australia), respectively.

We have used the index scores on these two dimensions for countries where information is available from the survey of 1995 or surveys close to 1995.[1] In total, 88 out of our 138 countries of origin had information on the indexes from at least one survey, and 60 percent of these from the 1995 survey. For the remaining 50 countries we interpolated using information for adjacent, similar countries. We have previously checked the robustness of this procedure and found that it did not bias the results in any way (Dribe & Lundh forthcoming). In the analysis, we subtract the country-specific figures from those of Sweden in 1995, thereby creating a measure of the value dissimilarity between the different countries and Sweden. Table 1 displays the mean value dissimilarity for men and women in the sample. All other things equal, we expect greater dissimilarity in values to increase the risks of separation.

We measure religion of immigrants by the dominant religion in the country of origin.[2] It is divided into five different categories: Protestant, Catholic, Other Christian, Muslim, and Other religions (Hindu, Buddhist, Shinto, Daoist, Jewish, and different indigenous beliefs). As shown in Table 1, about 40 percent of the immigrants in the sample come from a Christian country, while around 50 percent are of Muslim origin.

We also control for a number of variables commonly included in divorce models. Civil status is a necessary control variable as both formally married and cohabitors are included in the sample. Previous research has generally found dissolution risks to be higher among cohabitors than among formally married, reflecting the higher degree of commitment in the former unions (Liefbroer and Dourlein 2006; Nock 1995b). Educational level is a time-varying measure of the highest education attained, as recorded in the education register. The variable is categorized from basic level (less than nine years) to having a post-graduate degree (PhD, PhLic). In previous research, higher education usually seems related to higher marriage stability (Castro Martin and Bumpass 1989; Hoem 1997; Tzeng and Mare 1995; Jalovaara 2001, 2003).

Partner education indicates whether or not the union is homogamous. While some previous research shows that educational heterogamy increases union dissolution (Schoen 2003; Goldstein and Harknett 2006; Jalovaara 2003), there are opposing results as well, showing no, or only a minor, effect of educational heterogamy on divorce risks (Bumpass and Sweet 1972; Tzeng and Mare 1995; Tjötta and Vaage 2003). In other cases effects appear to differ between the sexes (Henz and Jonsson 2003; Kalmijn 2003).

Age and age difference between the spouses are also included. Most previous studies have found wife-older heterogamy to be related to higher divorce risks (e.g. Bumpass and Sweet 1972; Lehrer 1996; Finnäs 1997), but others have found no effects of age heterogamy (e.g. Schoen 2003; Schoen et al. 2002), and some have even found husband-older heterogamous unions to be most divorce prone (Tjötta and Vaage 2003).

Individual income is the inflation-adjusted total income received from labor or labor induced activities. It includes income from employment or self-employment, unemployment benefits, sickness insurance, and pre-retirement benefits. Thus, all kinds of welfare state transfers not

[1] Data was accessed through www.worldvaluessurvey.org.

[2] The classification of the dominant religion of the included countries was based on CIA's World Factbook (https://www.cia.gov/library/publications/the-world-factbook/fields/2098.html). In some cases when information was missing or inferior, or when two or more religions were equally important, more qualitative information was gathered from encyclopedias or similar sources in order to make a final classification.

related to previous work, such as social assistance, student benefits, housing cost transfers, etc, are not included in the income measure. Higher household (or sometimes male) income has been shown to be negatively related to divorce in several studies (Jalovaara 2001; Henz and Jonsson 2003; Svarer and Verner 2008; Weiss and Willis 1997). However, theory point to the income relation between the spouses as a perhaps more crucial variable (e.g. Becker 1991; see also Ono 1998). Partner income measures whether or not the union is homogamous in income. Previous research has indicated that earnings homogamous couples, or couples where the husband has lower income than the wife, often face higher divorce risks than couples in which the husband earns more than the wife, although it seems to end unhappy marriages rather than breaking up happy ones (Jalovaara 2003; Rogers 2004; Schoen et al. 2002). In cohabiting unions, on the other hand, earnings homogamy instead appears to promote stability (Brines and Joyner 1999)

Children are usually assumed to stabilize partnerships (Andersson 1997; Becker, Landes and Michael 1977; Tjötta and Vaage 2003), even though it might as well be the other way around that less divorce prone couples are more likely to have children (Lillard and Waite 1993; Svarer and Verner 2008). In either case, it is important to control for the possible relationship between number of children and the age of the youngest child in a separation model.

Finally we include two measures of conditions of the place of residence. The unemployment rate in the county serves to measure regional labor market conditions. Previous studies using both micro level and macro level data point to higher divorce rates in times of economic downturns (see, e.g., Kalmijn et al. 2007; Jalovaara 2001, 2003). Studies using Swedish and Danish register data, however, have found a positive relationship between unemployment and dissolution only for men (Jensen and Smith 1990; Norberg-Schönfeldt 2007), and similar results have been found in other contexts as well (see Ström 2003). We also include a measure of type of municipality, which captures differences in dissolution risks according to population density, and perhaps most important between rural and urban areas.

Results

Figure 1 and 2 shows proportions still in first union by partnership type for immigrant men and women, respectively. For men the exogamy hypothesis gets strong support, even though it should be remembered that we are not controlling for any background variables at this point. Men in endogamous unions show the lowest dissolution rates while those in unions with native women show the highest, and those with another immigrant are in between. For women the pattern is a bit different. Immigrant women in exogamous unions with a native seem to have a similar dissolution pattern as those in endogamous partnerships; only women in exogamous unions with a partner of another immigrant origin have a higher risk of separation.

Figure 1-2 here

Turning to natives, Figures 3-4 picture the proportions of men and women still in their first union by partner type. Here the pattern seems to be the opposite. For men exogamy appears connected to a lower separation risk, while for women there clearly seems to be a much higher risk of union dissolution for those exogamously partnered. Thus, although firm conclusions have to wait until we have looked at the multivariate models, it seems quite

evident that the picture emerging is more complicated than just a simple exogamy effect or, for that matter, a simple convergence effect.

Figure 3-4 here

Table 2 displays the multivariate estimates for immigrants. Looking first briefly at the control variables they are broadly speaking consistent with previous research on important determinants of divorce. Non-marital cohabitation is associated with a much higher separation risk than marital ones, both for men and women. Higher level of education lowers the dissolution risk. Having a spouse with lower education increases the separation risk for both men and women, while having a spouse with higher education lowers the risk of union dissolution for immigrant females. Age homogamy is connected to a low separation risk, while especially the a-typical wife-older heterogamous unions have a higher risk of separation. For immigrant women, being married to a husband more than three years older implies a lower risk of separation than being married to a husband of similar age. Higher income is connected to a lower risk of union dissolution for both men and women, and earnings homogamy is also connected to a lower separation risk for both men and women compared to earnings heterogamous unions, regardless of whether the man or the woman earns less. For both sexes a lower relative income of the spouse is associated with a higher risk of separation. There is no apparent relationship between the number of children and the probability of a separation, but there is a strong effect of the age of the youngest child: the separation risk tend to increase more or less linearly with the age of the youngest child. Somewhat surprisingly, higher regional unemployment lowers the separation risk, indicating that people tend to stick together in bad times, and break up when labor market conditions are good. This result is clearly at odds with studies using individual unemployment data. A possible explanation could be that controlling for own income and partner income, aggregate level unemployment measures the economic expectations of couples. High levels of unemployment indicate uncertain times, which induce employed couples to stick together in order to lower economic risks. Similar differences in effects of aggregate and individual unemployment is visible for fertility, where higher aggregate unemployment depress fertility, while individual unemployment does not have much effect (Hoem 2000; Kravdal 2002; Dribe and Stanfors 2009) Finally, union dissolution is higher in urban areas, especially in the metropolitan areas.

Table 2 here

Turning to the main focus it is quite clear that among immigrant men there is a pronounced exogamy effect on union dissolution. Being exogamously partnered to a native increases the separation risk compared to being endogamously partnered by about 30 percent, and the effect of exogamy with another immigrant is roughly the same. For immigrant women, the picture is quite different. Exogamy with a native is associated with a lower risk of separation compared to endogamy. There is support for the exogamy hypothesis for women as well, but only for those being exogamously partnered with another immigrant. It is also clear from the results in Table 2 that religion and value system of the country of origin affect the separation risk. However, our main interest is how these variables interact with partner type, which we explore in Table 3.

We estimated three different interaction models each including interaction terms with partner type and controlling for all other covariates. Panel A shows the net effects of partner type by religion, panel B by traditional-rational values, and panel C by survival-self expression

values. Looking first at partner type by religion in panel A, there is a clear exogamy effect among men only for immigrants from Protestant and Muslim countries (the latter is not statistically significant). Overall there is no confirmation of the dissimilarity hypothesis, i.e. that greater dissimilarity increases the separation risk. Instead we find that exogamous immigrants from Protestant countries have a higher relative separation risk than have those coming from Catholic and Other Christian countries, and immigrant from other religions have an even lower separation risk when partnered with natives compared to endogamy.

Table 3 here

For women the pattern is a bit different, but there is no support for the dissimilarity hypothesis here either. Only for immigrants from Protestant countries do we find a higher separation risk for exogamous-native compared to endogamous, and immigrants from Catholic and other Christian origins have a lower dissolutions risk if they are partnered with a native than with someone from the same background. Immigrant women married to immigrants of a different origin have a higher separation risk regardless of religion, except in the case of immigrants from other religions who experience a lower separation risk when exogamously partnered compared to endogamy.

Looking at the net effects of partner type and values in Panels B and C we find support for the cultural dissimilarity hypothesis, especially for men. Greater value dissimilarity increases the exogamy effect for immigrant men in both value dimensions, especially in the case of native-exogamy. The effects are, however, by no means huge. For women we, again, find a different pattern. Immigrants from countries with greater value dissimilarity have a lower separation risk if they are exogamously partnered with a native compared to endogamy, which is consistent with the view that some native men prefer partners with traditional values. For the survival-self expression value dimension, both men and women show stronger, or in some cases, less negative, exogamy effects as value dissimilarity increases.

Thus far we have only been looking at immigrants in Sweden and compared those exogamously partnered with the endogamous ones. However, it is also relevant to look at natives. The central question here is the extent to which exogamy increases the separation risk, or on the contrary, whether natives partnered with immigrants have lower separation risks which could be expected from a convergence point of view because most immigrants come from origins with lower divorce rates than Sweden.

Table 4 displays the full model estimates. As was the case for immigrants the results of control variables are basically consistent with previous research and theoretical expectations. The difference in separation risks between formally married and cohabitors are less for natives than for immigrants. While income was negatively related to separations for immigrants there is no relation for natives. Also in the case of spouse earnings there are differences worth noting. For immigrants earnings homogamous couples experienced lower rates of union dissolution. Among natives, men with partners earning more than themselves are more likely to separate, and the same is true for women partnered with men earning less than they do. This is what could be expected given the different normative views on earnings of men and women. Unions where the man earns less than the women are a-typical and also suffer a higher dissolution risk than earnings homogamous or the more common unions where the man has higher income.

Table 4 here

As to our main focus we find a negative effect of exogamy for men but not for women. However, as we also control for both values and religion this overall effect is less informative, as it is valid for immigrants from Protestant countries with values similar to those in Sweden. Religion measures the effect of partner religion on the separation risk in addition to the overall effect of exogamy. For example, being married to a Muslim immigrant appears to lower the separation risk, and more so for men than for women. However, the fact that no Muslim countries have value systems similar to the Swedish, also needs to be taken into account, which can be done by calculating predicted effects by religion and values simultaneously. Table 5 shows predicted exogamy effects by different combinations of religion and value systems calculated from the results presented in Table 4.

Table 5 here

The table makes it quite clear that value systems matter much more than religion for the separation risk. The greater the value dissimilarity the higher the separation risk, and this is clear for both men and women, even though the effects for women are a bit higher. Native women with partners from Catholic or Muslim countries with value differences of 3 in both dimensions have 2 to almost 3 times higher separation risks than endogamously partnered, while for native men the corresponding figures are 37 percent and 117 percent, respectively. For women with partners from Protestant countries the effects of value dissimilarity are even larger. This clearly shows that the exogamy effects found for immigrants (in particular for immigrant men) are also present for natives. Thus, the exogamy effect on union dissolution is not a simple convergence effect where immigrants adjust to a native separation pattern, and exogamous natives adjust to immigrant dissolution patterns. Instead, the results point quite clearly to exogamy being related to higher dissolution risks also when controlling for a wide range of variables measuring specialization and dependency.

Conclusion

In this paper we study the influence of exogamy on the risks of separation for native Swedes and immigrants who came to Sweden as adults. In particular, we study the overall connection between exogamy and partnership stability and the importance of cultural dissimilarity between the spouses for the risk of separation.

Overall, our results provide support for the *exogamy hypothesis,* i.e. that mixed unions face higher dissolution risks than endogamously partnered immigrants or natives. However, for immigrant women, being partnered with a native does not seem to increase the separation risk, which indicates that the pattern is a bit more complicated. For both immigrant men and women, being exogamously united with another immigrant increases the likelihood of union dissolution.

We also find quite strong support for the *cultural dissimilarity hypothesis,* that the disruptive effect of exogamy increases with the degree of cultural dissimilarity between the partners. Differences in values between partners, especially along the traditional-rational dimension, are of great importance for dissolution risks. However, when controlling for variation in values, the degree of dissimilarity in religion does not seem to have any impact on separation risks. As previously mentioned, traditional values in the Inglehart index reflect societies with a low level of secularization. Linked are for instance the emphasis on parent-child ties,

authority, traditional family values, absolute standards, and the rejection of divorce. Our interpretation of the results is that these kinds of values more or less capture the importance of religion for union dissolution; i.e. it is not the dissimilarity between religions *per se* that has an impact on union dissolution, but differences in values between religious groups. The major value effect is that a large difference between partners in traditional-rational values considerably increases separation risks. There is also an additional minor positive effect on separation risks of differences between spouses in survival-self expression values, indicating that attitudes to gender equality and tolerance in relation to minority groups has an impact on separation risks as well.

The *gender difference hypothesis*, that the effects on union dissolution of exogamy and cultural dissimilarity between partners are different for men and women, also gets support from our results. Judging from the Kaplan-Meier estimates, exogamy (native-immigrant union) seems to increase the separation risks for native women and immigrant men but not for native men and immigrant women. In the multivariate analysis, controlling for composition effects, we find a somewhat different pattern. To natives, exogamy seems to increase dissolution, the effect being somewhat stronger for women. For immigrant men we find a similar positive effect on separation of a native-immigrant partnership. However, for immigrant women we find a negative effect on the separation risk of exogamy with a native. Moreover, while for natives and immigrant men, greater value dissimilarity between the partners increases the separation risk, the opposite is true for immigrant women: the greater the value distance according to the traditional-rational values dimension, the lower the risk of union dissolution.

One possible interpretation of this result is that some native men prefer immigrant women with traditional values who specialize in household duties rather than on market work. This arrangement increases specialization gains from the partnership, which counteracts the increase in union tension that exogamy gives rise to. For immigrant women, the net effect is a reduction in the separation risk compared to being endogamously partnered. For native men, the net effect of being in a mixed union is an increase in the dissolution risk, but not as much as for native females. In the case of exogamous unions between an immigrant man and a native woman no similar gains from traditional values is expected. On average native women are characterized by rational and self-expressive values, including a positive attitude towards female labor force participation and equal gender roles. To the extent that the male immigrant party opposes such values in favor of more traditional familistic values, this probably creates a tension to the union.

In conclusion, even though our results basically confirm that exogamy increases risks of union dissolution, there are important differences according both to gender and the degree of cultural dissimilarity that are vital to take into consideration. Returning to the issue of immigrant integration, there is mounting evidence that intermarriage with natives is a crucial aspect of the integration process in most Western countries. It is clear, for example, that the propensity to intermarry with natives is greatest among immigrants that are more similar in terms of values to the majority population (Dribe and Lundh forthcoming). However, there are also strong indications that intermarriage has a causal impact on the earnings of immigrant men (Meng and Gregory 2005; Meng and Meurs 2009) and that the effects are greatest for the groups with the lowest intermarriage rates, i.e. the most dissimilar immigrants (Dribe and Nystedt 2009). Thus, marrying a native seems to promote economic integration of the most disadvantaged immigrant groups. In this paper, however, we have indicated that this process possibly also have a downside in that marrying a native increases dissolution risks for

immigrant men, especially those coming from highly dissimilar origins in terms of values. Immigrant women, however, appear to fare much better, as shown by the lower dissolution risks for the intermarried. In short, our findings indicate the complexity of intermarriage and its association with immigrant integration, and that analyses in the field should consider the aspects of cultural differences and gender, as well as their interaction.

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Table 1. Descriptive statistics.

	Immigrants		Natives	
	Men	Women	Men	Women
Partnership duration (years)	%	%	%	%
<1	15.7	15.5	13.9	13.9
1	13.8	13.7	12.6	12.6
2	12.1	12.0	11.3	11.3
3	10.6	10.5	10.1	10.1
4	9.2	9.2	9.0	9.0
5	8.0	8.0	8.0	8.0
6	6.9	6.9	7.1	7.1
7	5.9	5.9	6.3	6.3
8	5.0	5.1	5.4	5.4
9	4.2	4.2	4.7	4.7
10	3.2	3.3	3.9	3.9
11	2.3	2.4	3.1	3.1
12+	3.1	3.2	4.6	4.6
Type of partnership	%	%		
Endogamous	63.6	63.4	96.5	96.6
Exogamous-native	24.3	24.6	3.5	3.5
Exogamous-other	12.1	12.1	NA	NA
Religion	%	%	%*	%*
Protestant	13.1	13.9	97.9	97.8
Catholic	12.9	15.9	1.2	0.9
Other Christian	14.4	13.8	0.3	0.4
Muslim	54.9	48.9	0.2	0.8
Other	4.7	7.6	0.5	0.1
Values (relative to Sweden 1995)			*	*
Traditional-Rational	1.9	1.8	0.0	0.1
Survival-Self Expression	2.4	2.4	0.1	0.1
Civil status	%	%	%	%
Cohabiting	12.5	10.5	43.3	43.6
Married	87.5	89.5	56.7	56.4
Education	%	%	%	%
NA	7.0	10.2	0.1	0.1
Basic<9	9.9	12.9	0.4	0.1
Basic 9	11.5	10.8	10.3	6.6
High school<3	20.0	15.8	40.3	33.2
High school 3	19.3	19.1	14.8	21.8
Post high sch. <3	12.7	12.9	17.1	19.7
University 3+	17.2	17.0	15.9	18.2
Post-graduate	2.4	1.2	1.2	0.5
Partner education	%	%	%	%
Lower	32.7	26.6	25.0	36.5
Same	28.0	28.3	38.1	38.1

Higher	30.6	39.9	36.6	25.1
NA	8.8	5.2	0.3	0.4
Age (years)	36.8	32.8	34.1	31.9
Partner age	%	%	%	%
3+ years younger	53.0	4.1	29.3	4.1
Within +/- 3 years	42.8	41.5	66.6	66.8
3+ years older	4.3	54.4	4.1	29.1
Income (base amounts)	5.1	3.4	7.8	5.6
Partner income	%	%	%	%
>1 base amount below	48.2	16.6	59.0	16.1
Within +/- 1 base amount	30.5	28.8	25.6	25.8
>1 base amount above	21.3	54.7	15.4	58.1
Previous children born	%	%	%	%
1	58.9	60.4	42.3	42.1
2	31.7	30.6	48.2	48.4
3	7.3	7.0	8.6	8.7
4+	2.1	1.9	0.9	0.9
Age of youngest child	%	%	%	%
<1 years	25.3	24.6	24.6	24.7
1	20.4	19.9	21.2	21.3
2	14.4	14.2	14.7	14.7
3	10.3	10.4	10.1	10.1
4	7.7	7.9	7.4	7.4
5	5.9	6.0	5.8	5.7
6	4.5	4.7	4.6	4.5
7	3.5	3.7	3.6	3.6
8+	8.0	8.6	8.1	8.0
County unemployment rate (%)	5.9	5.9	6.2	6.2
Municipality	%	%	%	%
Metro cities	30.1	29.0	12.4	12.5
Metro suburbs	18.1	18.3	18.0	18.0
Big cities	27.9	27.6	28.1	28.2
Commuter	3.6	3.8	6.6	6.6
Rural	1.0	1.3	3.2	3.2
Manufacturing	5.5	5.7	7.0	7.0
Other>25000	8.9	9.2	14.5	14.5
Other12500-25000	3.5	3.6	7.3	7.3
Other<12500	1.4	1.5	2.9	2.9
N	436204	437826	3075945	3074323
Separations	11364	9650	70156	71870

Note: * Refer to partner.

Table 2. Relative risks of separation. Immigrants.

	Men		Women	
	RR	p	RR	p
Partnership duration				
<1	1	reference	1	reference
1	1.31	0.000	1.43	0.000
2	1.43	0.000	1.62	0.000
3	1.40	0.000	1.62	0.000
4	1.23	0.005	1.47	0.000
5	1.32	0.001	1.46	0.000
6	1.15	0.113	1.39	0.001
7	1.07	0.500	1.29	0.017
8	0.96	0.704	1.16	0.208
9	1.01	0.907	1.18	0.182
10	0.67	0.003	0.98	0.859
11	0.71	0.017	0.93	0.634
12+	0.56	0.000	0.71	0.024
Type of partnership				
Endogamous	1	reference	1	reference
Exogamous-native	1.32	0.000	0.85	0.000
Exogamous-other	1.29	0.000	1.25	0.000
Religion				
Protestant	1	reference	1	reference
Catholic	1.06	0.125	1.24	0.000
Other Christian	1.48	0.000	1.65	0.000
Muslim	0.88	0.014	0.89	0.052
Other	1.49	0.000	1.39	0.000
Values (relative to Sweden 1995)				
Traditional-Rational	1.31	0.000	1.22	0.000
Survival-Self Expression	1.05	0.005	1.01	0.503
Civil status				
Cohabiting	3.97	0.000	4.15	0.000
Married	1	reference	1	reference
Education				
NA	1.06	0.150	1.10	0.036
Basic<9	1.06	0.117	1.04	0.340
Basic 9	1.15	0.000	1.16	0.000
High school<3	1	reference	1	reference
High school 3	0.92	0.003	0.89	0.001
Post high sch. <3	0.79	0.000	0.71	0.000
University 3+	0.63	0.000	0.63	0.000
Post-graduate	0.37	0.000	0.55	0.000
Partner education				
Lower	1.22	0.000	1.20	0.000
Same	1	reference	1	reference

Higher	0.97	0.324	0.95	0.066
NA	1.08	0.055	1.03	0.542
Age	0.98	0.000	0.97	0.000
Partner age				
3+ years younger	1.07	0.002	1.31	0.000
Within +/- 3 years	1	reference	1	reference
3+ years older	1.18	0.000	0.91	0.000
Income	0.96	0.000	0.96	0.000
Partner income				
>1 base amount below	1.22	0.000	1.30	0.000
Within +/- 1 base amount	1	reference	1	reference
>1 base amount above	1.14	0.000	1.05	0.035
Previous children born				
1	1	reference	1	reference
2	0.96	0.303	1.02	0.598
3	1.03	0.672	1.10	0.141
4+	1.08	0.487	1.05	0.659
Age of youngest child				
<1 years	1	reference	1	reference
1	1.31	0.000	1.29	0.000
2	1.51	0.000	1.46	0.000
3	1.73	0.000	1.73	0.000
4	1.80	0.000	1.79	0.000
5	1.93	0.000	2.09	0.000
6	2.20	0.000	2.17	0.000
7	2.26	0.000	2.39	0.000
8+	2.33	0.000	2.38	0.000
County unemployment rate (%)	0.94	0.000	0.94	0.000
Municipality				
Metro cities	1.58	0.000	1.74	0.000
Metro suburbs	1.20	0.004	1.27	0.001
Big cities	1.18	0.005	1.31	0.000
Commuter	1	reference	1	reference
Rural	0.82	0.093	0.95	0.694
Manufacturing	0.97	0.734	0.92	0.375
Other>25000	1.22	0.003	1.22	0.007
Other12500-25000	0.98	0.795	1.02	0.815
Other<12500	0.77	0.019	0.85	0.171
Observations	436204		437826	
Separations	11364		9650	
Wald chi2(81)	9294	0.000	6829	0.000

Note: Period and county of residence are also controlled for in the model. Estimates based on Complementary log-log regressions with robust standard errors.

Table 3. Effects of partner type on separations by religion and value system in country of origin. Immigrants

A.Religion

	Protestant		Catholic		Other Christian		Muslim		Other	
	RR	p	RR	p*	RR	p*	RR	p*	RR	p*
Men										
Endogamous	1		1		1		1		1	
Exogamous-native	1.57	0.000	1.01	0.000	1.06	0.000	1.65	0.536	0.91	0.000
Exogamous-other	1.77	0.000	1.08	0.001	1.06	0.000	1.45	0.119	0.69	0.000
Women										
Endogamous	1		1		1		1		1	
Exogamous-native	1.17	0.049	0.79	0.000	0.92	0.033	1.13	0.752	0.58	0.000
Exogamous-other	1.82	0.000	1.18	0.001	1.35	0.016	1.26	0.001	0.76	0.000

B. Traditional-Rational values, relative to Sweden 1995

	No difference		1 unit	2 units	3 units	
	RR	p	RR	RR	RR	p*
Men						
Endogamous	1		1	1	1	
Exogamous-native	1.17	0.004	1.24	1.32	1.41	0.008
Exogamous-other	1.23	0.005	1.26	1.29	1.31	0.540
Women						
Endogamous	1		1	1	1	
Exogamous-native	1.05	0.422	0.93	0.83	0.73	0.000
Exogamous-other	1.55	0.000	1.39	1.24	1.11	0.000

C. Survival-Self expression values, relative to Sweden 1995

	No difference		1 unit	2 units	3 units	
	RR	p	RR	RR	RR	p*
Men						
Endogamous	1		1	1	1	
Exogamous-native	0.92	0.155	1.08	1.27	1.50	0.000
Exogamous-other	0.96	0.680	1.07	1.21	1.35	0.004
Women						
Endogamous	1		1	1	1	
Exogamous-native	0.62	0.000	0.72	0.84	0.97	0.000
Exogamous-other	0.88	0.205	1.02	1.17	1.34	0.000

Note: Estimates from separate interaction models controlling for all covariates in Table 2. *p-value of interaction effect. Net effects in panel B and C are predictions from linear effects of values, and p-values refer to the linear effect..

Table 4. Relative risks of separation. Natives.

	Men		Women	
	RR	p	RR	p
Partnership duration				
<1	1	reference	1	reference
1	0.84	0.000	0.87	0.000
2	0.83	0.000	0.86	0.000
3	0.88	0.000	0.92	0.005
4	0.91	0.003	0.96	0.186
5	0.90	0.003	0.98	0.484
6	0.86	0.000	0.93	0.073
7	0.86	0.000	0.94	0.134
8	0.85	0.000	0.94	0.193
9	0.85	0.001	0.96	0.434
10	0.85	0.003	0.95	0.319
11	0.76	0.000	0.86	0.008
12+	0.56	0.000	0.65	0.000
Type of partnership				
Endogamous	1	reference	1	reference
Exogamous	0.78	0.000	1.00	0.953
Religion				
Protestant	1	reference	1	reference
Catholic	0.89	0.107	0.88	0.019
Other Christian	0.68	0.001	0.75	0.000
Muslim	0.56	0.000	0.66	0.000
Other	0.76	0.002	0.90	0.348
Values (relative to Sweden 1995)				
Traditional-Rational	1.11	0.001	1.24	0.000
Survival-Self Expression	1.32	0.000	1.17	0.000
Civil status				
Cohabiting	2.39	0.000	2.40	0.000
Married	1	reference	1	reference
Education				
NA	2.38	0.000	2.14	0.000
Basic<9	2.48	0.000	1.83	0.000
Basic 9	1.61	0.000	1.78	0.000
High school<3	1	reference	1	reference
High school 3	0.80	0.000	0.80	0.000
Post high sch. <3	0.61	0.000	0.69	0.000
University 3+	0.52	0.000	0.61	0.000
Post-graduate	0.44	0.000	0.56	0.000
Partner education				
Lower	1.42	0.000	1.19	0.000
Same	1	reference	1	reference
Higher	0.78	0.000	0.92	0.000

NA	1.27	0.000	1.26	0.000
Age	0.90	0.000	0.89	0.000
Partner age				
3+ years younger	1.79	0.000	1.96	0.000
Within +/- 3 years	1	reference	1	reference
3+ years older	0.92	0.000	1.02	0.034
Income	1.00	0.009	0.99	0.014
Partner income				
>1 base amount below	0.94	0.000	1.30	0.000
Within +/- 1 base amount	1	reference	1	reference
>1 base amount above	1.26	0.000	0.91	0.000
Previous children born				
1	1	reference	1	reference
2	0.96	0.002	0.96	0.003
3	1.03	0.330	1.01	0.692
4+	1.13	0.053	1.11	0.096
Age of youngest child				
<1 years	1	reference	1	reference
1	1.98	0.000	1.97	0.000
2	2.90	0.000	2.88	0.000
3	3.74	0.000	3.70	0.000
4	4.42	0.000	4.40	0.000
5	4.97	0.000	4.93	0.000
6	5.40	0.000	5.43	0.000
7	5.74	0.000	5.76	0.000
8+	6.03	0.000	6.14	0.000
County unemployment rate (%)	0.95	0.000	0.95	0.000
Municipality				
Metro cities	1.56	0.000	1.56	0.000
Metro suburbs	1.11	0.000	1.11	0.000
Big cities	1.28	0.000	1.27	0.000
Commuter	1	reference	1	reference
Rural	0.95	0.038	0.92	0.003
Manufacturing	0.95	0.049	0.95	0.037
Other>25000	1.12	0.000	1.12	0.000
Other12500-25000	1.00	0.982	0.99	0.677
Other<12500	0.91	0.001	0.90	0.000
Observations	3075945		3074323	
Separations	70156		71870	
Wald chi2(81)	56565	0.000	65584	0.000

Note: Period and county of residence are also controlled for in the model. Estimates based on Complementary log-log regressions with robust standard errors.

Table 5. Predicted exogamy effects by religion and value differences. Relative risks (endogamy=1).

A.Men

Partner religion	**Values differences: Traditional-Rational:Survival-Self expression**								
	1:1	1:2	1:3	2:1	2:2	2:3	3:1	3:2	3:3
Protestant	1.14	1.51	1.99	1.27	1.67	2.21	1.41	1.86	2.45
Catholic	1.01	1.33	1.76	1.12	1.48	1.95	1.25	1.64	2.17
Other Christian	0.77	1.02	1.35	*0.86*	1.13	1.50	*0.95*	*1.26*	1.66
Muslim	*0.64*	*0.84*	1.11	*0.71*	0.93	1.23	*0.78*	1.04	1.37
Other	*0.87*	1.15	1.52	*0.97*	1.28	1.68	*1.07*	1.42	*1.87*

B. Women

Partner religion	**Values differences: Traditional-Rational:Survival-Self expression**								
	1:1	1:2	1:3	2:1	2:2	2:3	3:1	3:2	3:3
Protestant	1.45	1.70	2.00	1.81	2.12	2.49	2.25	2.64	3.09
Catholic	1.28	1.50	1.76	1.59	1.87	2.19	1.98	2.32	2.72
Other Christian	*1.09*	1.27	1.49	*1.35*	1.59	1.86	*1.69*	*1.97*	2.31
Muslim	*0.97*	*1.13*	1.33	*1.20*	1.41	1.65	*1.50*	1.75	2.05
Other	*1.31*	1.54	1.80	*1.63*	1.91	2.24	*2.03*	2.38	*2.79*

Note: Based on the estimates in Table 4. 1:1, Traditional-Rational 1 unit difference, Survival-Self expression. 1 unit difference; 1:2, Traditional Rational 1 unit, Survival Self expression. 2 units, etc. Italics indicate out-of-sample predictions, i.e. that there are no countries showing these combinations.

Figure 1. Proportion still in partnership by partnership duration (Kaplan-Meier estimates). Immigrant males.

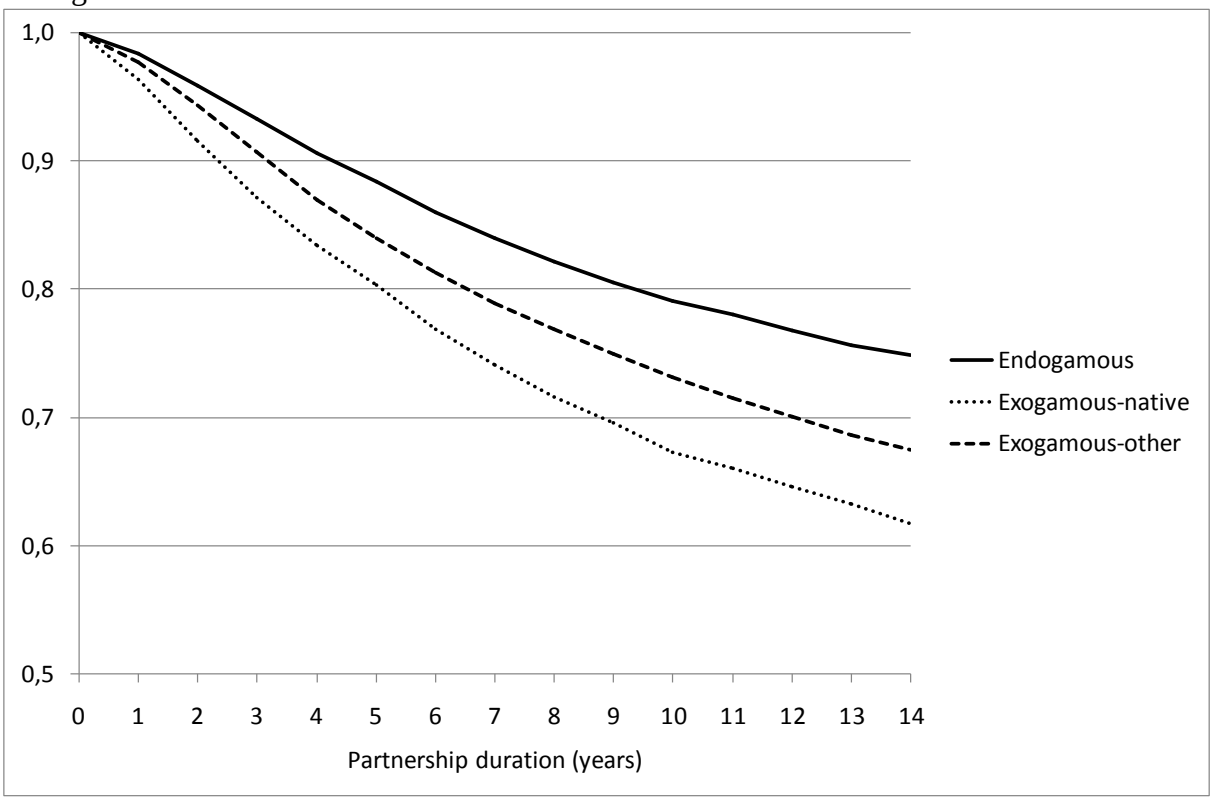

Figure 2. Proportion still in partnership by partnership duration (Kaplan-Meier estimates). Immigrant females.

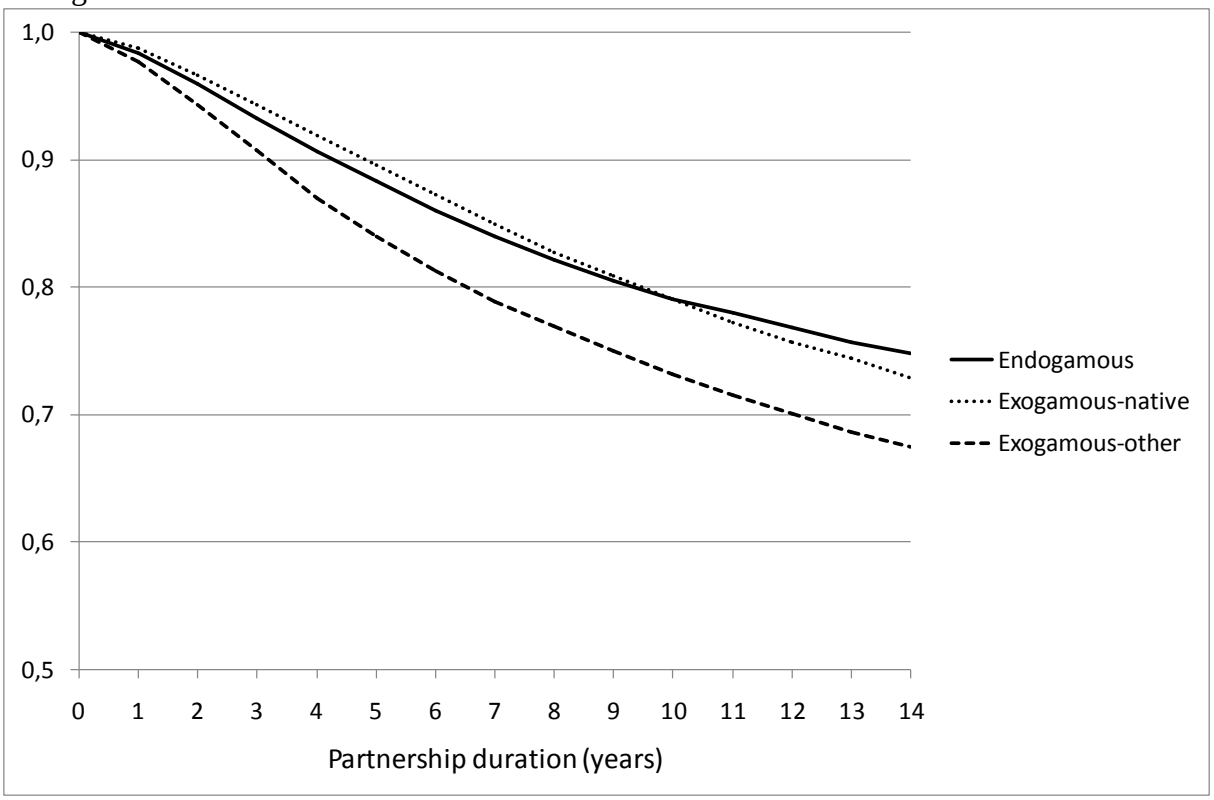

Figure 3. Proportion still in partnership by partnership duration (Kaplan-Meier estimates). Native males.

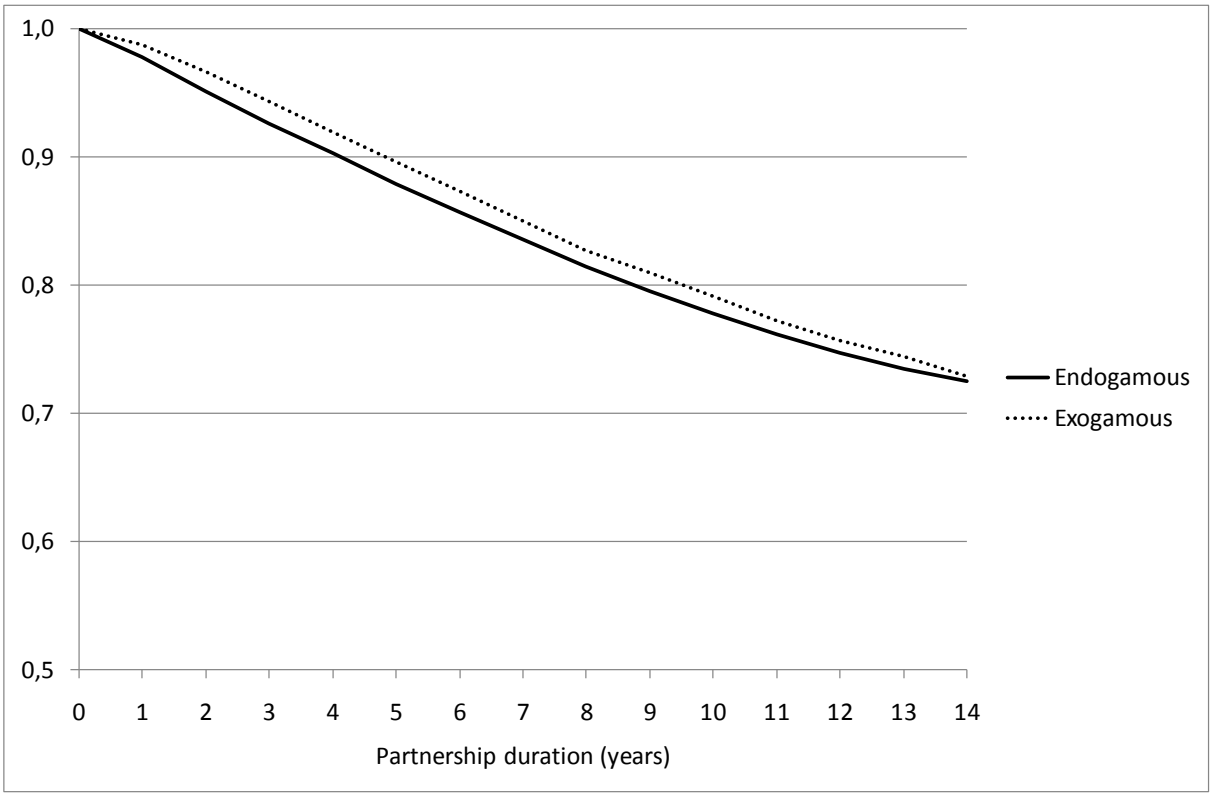

Figure 4. Proportion still in partnership by partnership duration (Kaplan-Meier estimates). Native females.