Partner Choice in Sweden: How Distance Still Matters

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Partner Choice in Sweden: How Distance Still Matters

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Abstract: Spatial homogamy, or the geographical closeness of life partners, has received little attention in recent decades. Theoretically, partners may be found anywhere in the world, as increases in educational participation, affluence, mobility and internet access have reduced the meaning of geographical distance in general. This paper examines whether geography still matters in the current Swedish partner market. Register data are used to track the residential histories (1990-2008) of couples who married or had a child in 1996, 2002 or 2008 (N=292,652). With the couple as the unit of analysis, the distance between partners before co-residence is explained by geographical, socio-economic and demographic indicators. I find that although the distance between partners has increased over time, it is still the case that half of all partners lived within nine kilometers of each other before moving in together. Demographic and socio-economic characteristics explain some of the variation in spatial homogamy, but geographical factors, such as previous place of residence, spatial mobility, degree of urbanization and nearness of parents, are crucial. Even in a globalized society, most people still find their partners very close by.

Keywords: partner choice, marriage, co-residence, spatial homogamy, Sweden
Introduction

It is well known from intermarriage studies that people tend to marry partners much like themselves; this is known as homogamy. Cultural differences between people are generally seen as hindering communication, and this is apparent, for instance, from findings that marriages that are mixed in terms of country of origin result in divorce more often than endogamous marriages (Dribe and Lundh, 2012 for Sweden; Kalmijn et al, 2005 and Smith et al, 2012 for the Netherlands). Traditionally, people tended to marry locals. Historical studies on distances between marital partners show patterns of ‘distance decay’: with increasing distance between potential partners, the probability of a partner match decreases.

Nowadays, however, substantial increases in social and spatial mobility, individual affluence, educational participation, travel abroad, and, not least, the use of the internet, may have led to geography no longer being a pivotal factor in partner choice. This fits in with visions of space becoming less important as a result of globalization, and with the ‘death of distance’, suggesting a world in which distance does not matter, where people are decoupled from place, and where societies are based on networks (e.g. Cairncross, 1997; Castells, 2010; Sheppard, 2002). But there are also indications that geography still matters. Samers (2010) argues that ‘fluctuations in the cost of energy over the last few years suggest that the problem of “overcoming distance” will not disappear’ (Samers 2010: 19), and Graham (2002) argues that ‘geography is not history’. Space-time constraints still restrict our daily activity patterns (Hägerstrand, 1970; Hanson and Hanson, 1993) and limit our opportunities to meet partners who come from far away. Being in close proximity to someone increases the probability of forming a relationship
with him or her. Moreover, the opportunities to meet partners are restricted by geography. Added to that, potential partners with specific characteristics, such as people from a particular ethnic group or with a certain educational level, are unevenly distributed across space, and local marriage markets have been shown to be highly segregated (Haandrikman, 2010). Recent studies found that half of all cohabiters in the Netherlands lived within 6 kilometers of each other before they moved in together (Haandrikman et al, 2008a); that neighborhood homogamy was the most important dimension in partner choice in Uruguay (Pullum and Peri, 1999); and that 61% of Chinese partners lived within 50 kilometers of each other in Guangzhou (Ouyang et al, 2009). Such patterns may be explained by the fact that bridging a distance still involves time, energy and cost.  

The aim of this paper is to analyze the spatial dimensions of the partner market in contemporary Sweden, using a longitudinal perspective. I use the term ‘spatial homogamy’ for the geographical closeness of future partners, operationalized as the geographical distance between partners before co-residence for partners who both lived in Sweden. In analyzing spatial homogamy over time, I contribute to an increased understanding of the role of distance in partner choice in contemporary society, and I shed light on the personal and geographical characteristics that influence the geographical distances between partners, as migration fields and marriage fields mirror the contacts that people have, and give a notion of what surroundings mean to people (Hägerstrand, 1951; Kälvemark, 1977; Kvillner, 1969). Changes in distances between partners tell us something about social and cultural changes over time: they have been related to the erosion of cultural peculiarities (Bylund, 1977), the integration of smaller communities into larger ones (Knippenberg and De Pater, 1988) and the weakening of regional
identification (Häkli and Paasi, 2003). The paper also attempts to fill a gap in homogamy research: the spatial dimension of homogamy is a relatively under-researched component, and many of the existing studies on this topic are outdated or are based on historical data, and are often concerned with islands, cities, or small areas.

From a geographical perspective, Sweden is an interesting case as it is a large country, covering an area of almost 450,000 square meters, with a population of only nine million. About 40% of the population resides in one of the three metropolitan areas of Stockholm, Gothenburg and Malmö. Sweden is considered to be one of the world’s most globalized countries (Dreher, 2006), foreign travel is very common (Frändberg, 2009), and the number of marriage migrants has increased greatly in the 1990s and 2000s last decade (Niedomysl et al, 2009). In addition to this interesting geographical context, the empirical side of the study is another of its strengths: longitudinal register data with excellent geographical features is used for the whole Swedish population for the period 1990-2008.

Preferences, Norms and Opportunities

In order to understand the mechanisms behind spatial homogamy, the metaphor of the partner market can be used. Contact opportunities determine the supply of partners, whereas partner preferences stimulate the demand side. Sociological studies generally assume that three factors influence partner choice: preferences, social norms, and opportunities (e.g. Kalmijn, 1998). This study applies these concepts in order to understand the geographical dimensions of partner choice, and the role of geography in changing patterns of spatial homogamy. First, abundant studies have shown that people
tend to choose partners similar to themselves. The resemblance between partners is usually interpreted to be a result of a preference for similarity, because by sharing values and worldviews each person confirms the other’s views and behavior, making the other more attractive (e.g. Kalmijn, 1991).

Modernization theory generally states that increased educational levels and economic independence lead to romantic love becoming the most important criterion when choosing a (marriage) partner. A shift from consanguinity to conjugality as a central principle of social relationships started as early as the fifth century (Goody, 1983). According to Shorter (1975), the increasing importance of love as a criterion for partner choice should lead to a change in mentality and the disappearance of (social) homogamy, though most studies have refuted this hypothesis (e.g. Van Leeuwen and Maas, 2002; Van de Putte, 2003). Goode (1963) associated increasing industrialization with changing family systems, in which individualistic values and personal fulfilment become increasingly important in mate selection. These developments imply increasing distances between potential partners. The choice of a partner from the same neighborhood or village nowadays might partly result from a preference for cultural similarity, given that language, religion and family values are often shared over such distances, as studies for the Netherlands have found (Haandrikman and Hutter, 2012; Van Poppel and Ekamper, 2005).

Second, the social and cultural norms of parents, family, peers, the church, and fellow-villagers, and the sanctions imposed when a partner is found outside the group, influence partner choice and homogamy. In most societies, including in Europe, parents usually had a say in their children’s marriages, often because of property concerns
Parental control was mostly directed towards influencing the meeting process: making sure that children met the right kind of partners. Such norms may lead to increased spatial homogamy if cultural homogamy is the norm. High endogamy rates among ethnic groups have, for instance, been explained by third party influences (Kalmijn and Van Tubergen, 2010), and, in a qualitative study, the partner’s place of origin and the assumed status of the partner’s family were perceived to be of primary importance in selecting a partner (Haandrikman and Hutter, 2012), suggesting an association between norms and geographical origin.

Third, the opportunities one has to meet potential partners may be the most obvious mechanism behind spatial homogamy. Meeting a person is normally assumed to be a precondition for falling in love with them, and as we spend most time at or close to home – Ellegård and Vilhelmson (2004) found that Swedes spend two thirds of their time at home or in the immediate environment of the home – the chance of forming a relationship with someone nearby is increased. Our opportunities to meet partners from far away are limited, because bridging a distance still involves time, energy and cost. Moreover, people tend to meet partners in local marriage markets that are segregated by, for instance, education and religion (Haandrikman, 2010). Another reason to expect spatial homogamy is that potential partners with preferred characteristics, such as a particular age, education or ethnicity, are unevenly distributed across space. Living in a remote area may significantly reduce the everyday probability of meeting an eligible partner.

In most of human history, marital distances were very short, as most people had hardly any information about potential marriage candidates who lived far away from their
‘information field’ (Marble and Nystuen, 1963; Morrill and Pitts, 1967). Then, throughout the world, different rules concerning endogamy and exogamy determine who is an eligible marriage partner, as described by Goode (1963). In sub-Saharan Africa, marriage usually had to take place within certain groups, such as tribes or ranks, and outside certain other groups, such as direct kin. In India, the exogamy rule meant that men could not marry women from adjacent villages or from the same lineage, leading to increased marital distances and distinct spatial marriage networks (e.g. Mayfield, 1972; Sivaram et al, 1995). Marriages between two people with the same surname or from the same clan were prohibited in China, which led to a substantial reduction in the availability of marriage partners and to marital distances that were quite long. Processes of modernization have been associated with weakening kinship ties, changes in mate selection practices, an increase in the geographical dispersion of social relations, increasing geographical mobility, and, hence, increasing contact opportunities between people of different backgrounds. As a result, the area from which eligible partners can come has been substantially enlarged (Goode, 1963), and we can suppose that geographical distances between eligible partners will increase with time.

**Spatial Homogamy: Previous Findings**

This section provides an overview of studies on spatial homogamy and their main findings and shortcomings, organized by the location of these studies. One of the first studies on spatial homogamy concluded that ‘Cupid may have wings, but apparently they are not adapted for long flights’ (Bossard, 1932: 222). This was based on a study of the distance between bride and bridegroom before marriage in Philadelphia. Similar studies
were mainly conducted in the US, using marriage licenses or census data on a city block level. Bossard (1932) found that, in Philadelphia, a third of all couples lived within five blocks of each other before marriage, and his study was followed by other sociologists who located their analyses in about eight other cities and had relatively similar findings. These studies indicated a very high degree of spatial homogamy in the period 1930-1960 for the United States, but most of them were based on very small samples and concentrated largely on white people.

In the UK, the earliest studies on marital distances, published in the 1960s, were historical in nature. Coleman and Haskey’s (1986) study in England and Wales in 1979 is particularly worthy of mention; it found that half of all married partners had lived within 5 kilometers of each other before marriage, with only 5% having lived more than 145 kilometers apart. Most studies found an increasing number of partners living very far apart, stretching the average marital distance (Clegg et al, 1998; Coleman, 1979). Studies on marital distances in the UK were based on marriage registers or surveys, focused on islands, cities or the countryside near cities, were mostly published in biology or genetics journals, and were similar to those in the US in that they were also relatively small scale.

Other European studies on spatial homogamy were of varying quality and setup, and used different definitions and methodology, sometimes examining spatial homogamy as a side topic. Most studies used marriage certificates as the source material and were of a historical nature or otherwise focused on the period 1960-1980; they include the studies of Gueresi, Pettener and Veronesi (2001), Van de Putte (2003) and Fornasin (2011). There are numerous historical studies on the geographical origin of partners in the cities and provinces of the Netherlands, such as those of Van Poppel and Ekamper (2005), Kok...
and Mandemakers (2008) and Maas and Zijdeman (2010). A recent cross-sectional study showed that half of all recent cohabitors had lived within six kilometers of each other before they started living together (Haandrikman et al, 2008a).

Outside Europe and the US, Pullum and Peri (1999) investigated homogamy by neighborhood level in Montevideo, Uruguay, while Peach (1974) found that assimilation and spatial segregation were inversely related in the 1960s in Sydney, Australia, and Morgan (1981) found that half of married couples in New Zealand in 1971 had lived less than two kilometers apart before marriage. A recent study in Guangzhou, China (Ouyang et al, 2009), showed that 61% of people married someone living within 50 kilometers, while 95% married someone living within 2,000 kilometers. A V-shaped pattern of mean marital distances has been observed in the last 50 years, with decreasing distances until the 1980s and then a dramatic increase until the turn of the century, when the mean marital distance was 440 kilometers; this was associated with the internet becoming an increasingly important marriage agent.

To summarize, the majority of studies have established that, across the globe, most partners are found close to home, but that, over time, there has been an increase in the number of partners found outside the parish, city or other administrative area. The studies were generally based on very small samples, were conducted in small areas and were mostly cross-sectional.

Swedish research

Published Swedish research on marriages fields is dated and rare (Bylund 1977). Kvillner (1969), in an overview of Swedish studies dealing with spatial homogamy, showed that
marriage fields were small in previous centuries, with a radius of about 10 kilometers, and he associated this with limited opportunities to meet partners from far away.

Beckman, a geneticist, found substantial regional differences in ‘inbreeding’ in northern Sweden in the period 1860-1920, linking patterns to community size, population density and traditional marriage practices (Beckman, 1959; 1960). Studying a rather isolated northern Swedish parish, Beckman (1959) found that there were hardly any changes in the distance between the places of residence of marriage partners – the marital distance was about six kilometers throughout the 60 years of observation – even though major socio-economic changes took place in that time. Beckman worked for the Institute for Medical Genetics in Uppsala, the successor to the State Institute for Racial Biology that had coordinated the racial mapping of the population, focusing on ethnic groups that did not belong to the Nordic/German racial type (Hagerman, 2006). The government-supported research at the Institute was aimed at prompting Swedes to make sound marriage choices i.e. to marry a Swede of the same racial type in order that their children would, like themselves, be of the same superior and purified ‘race’ (Hagerman, 2006).

Except for these genetically inspired studies, the few Swedish studies are mostly case studies of certain villages or parishes. Bylund (1977) found that, in the period 1861-1960, mobility within Sweden hardly changed, and migration distances were relatively short. Kvillner (1969) connected marriage fields to migration fields and to the size of cultural regions, and based this work on related studies by Hägerstrand (1951; 1957), who argued that knowledge about the geographical trends of individual contacts leads to knowledge about cultural diffusion. Following Shorter’s (1975) propositions, Van Leeuwen and Maas (2002) found no proof of a decline in social homogamy in a northern industrial area
in the nineteenth century. Using historical ethnographic studies, Van Leeuwen and Maas describe courtship practices regulated by rural fraternities, consisting of communal nightly visits, or so-called ‘bundling’, which was also found in Japan (Goode, 1963). These customs slowly disappeared from society, though parental control remained quite strong. A rather undocumented but often mentioned argument among Swedish researchers is that the introduction of the bicycle had substantial social meaning, as it greatly increased the potential marriage market; according to Ekström (1984), the amount of inbreeding in the countryside was reduced.

Developments in Sweden can be placed in a wider context, where modernization processes lead to a weakening of kinship ties, an increased number of individuals choosing their partners freely (‘true love’, see Shorter (1973)) and from a broader pool of potential partners, and an increased prevalence of separate living arrangements (Goode, 1963).

There are clear reasons for expecting that distances between partners in Sweden would be considerable and would change over time. Sweden is considered to be one of the most globalized countries of the world, and Swedes are known for their frequent visits and stays abroad, for work, study or leisure (Frändberg, 2009). There has been a substantial increase in the number of people completing higher education in the last few decades (Kupiszewski et al, 2001), and the more highly educated tend to find partners further away (e.g. Haandrikman et al 2008b). The use of the internet for finding a partner is also on the rise, and Sweden is very well connected to the internet (Ellegård and Vilhelms, 2004). Increasing numbers of Swedes marry foreign-born partners.
(Haandrikman, 2014), both migrants living in Sweden and marriage migrants (Niedomysl et al, 2009).

Factors Influencing Spatial Homogamy

From studies on spatial homogamy, three main groups of factors that influence the level of spatial homogamy can be identified: socio-economic status, demographic factors and geographical factors. These are discussed below, together with the expectations for the study.

Socio-economic status has been the influence on spatial homogamy that has been studied most, especially in historical studies. Typically, the higher social classes find partners at longer distances (see for instance Clegg et al, 1998; Haandrikman et al, 2008b; Van Poppel and Ekamper, 2005). This has been explained by a combination of factors: those in higher classes might prefer partners with a similar high status; there might be strong norms to marry endogamously; and, especially in the past, the higher social classes have had much more opportunity to search for partners in a wider geographical area. At present, the better educated and those with higher incomes might still have broader geographical networks and more opportunities to travel, increasing the chance of finding a partner from further away. I therefore expect that high socio-economic status is related to an increased distance between partners before co-residence.

Second, spatial homogamy is affected by demographic factors. Generally, with increasing age, distances between partners decrease; this is often associated with diminishing affluence for older people (Clegg et al, 1998; Coleman and Haskey, 1986; Haandrikman et al, 2008a). In addition, marital distances have been found to be shorter
for those who are single parents or who live with their parents before they move in with their partner (Haandrikman et al, 2008a), suggesting that local ties influence spatial homogamy. I therefore expect that, with increasing age, distances between partners will decline, and that spatial homogamy is stronger for single parents and those living with their parents before co-residing with their partner.

Third, spatial homogamy is influenced by geographical factors. First, the opportunities to meet partners depend on the physical geography of an area, with mountains and water masses acting as geographical barriers. In addition, distances between partners may vary by place of residence because of varying degrees of population density. In urban areas, spatial homogamy has been found to be stronger than in peripheral areas (Haandrikman et al, 2008a; Haandrikman and Van Wissen, 2011). Urban areas have higher densities of people, schools, jobs, and places of entertainment, and thus offer plenty of eligible partners. Large parts of Sweden are uninhabited, and this might seriously influence spatial homogamy levels in different parts of the country. Second, it seems plausible that individual migration propensities influence the distance at which partners are met and found. Geographical mobility changes one’s dating pool, and those who travel more have better chances of meeting more people (Smaldino and Schank, 2012). Third, regional variations in cultural factors, such as religion, mentality, and dialect, may lead to regional differences in spatial homogamy. Sweden is generally seen as one of the most equal countries in the world (Pred, 2000), without racism, class boundaries or other conflicts (Pred, 1997; Ehn et al, 1993). However, Sweden may be divided into different cultural areas, such as the traditional division between Norrland (north), Svealand (middle) and Götaland (south), based on differences in agriculture and,
for instance, construction types; or one could consider a division based on the diagonal border between the north western Swedes and the south eastern Geats, based on ethnological and linguistic material (Edlund, 1994; Öberg and Springfeldt, 1991).

Forsberg (1998) identifies regional gender contracts in different local cultures, such as the ‘industrial village atmosphere’ in Bergslagen, the ‘small town atmosphere’ in Småland, where the gender contract is comparatively less equal and more traditional, and the greatest gender equality that characterizes Sweden’s three metropolitan areas. Sweden’s bible belt is located around Jönköping, and, together with the south of Sweden, this area is often considered to be more traditional. Linguistically, we might expect more endogamous partner choice in areas with minority dialects or languages, as was found for the Netherlands (Haandrikman and Van Wissen, 2011). In Sweden, some Finnish is spoken in areas near the Finnish border, and in particular places in the north Sami, an official minority language, is still practiced. However, general public opinion is that dialectal and other cultural differences are fairly small, and would not deter people from marrying each other. We therefore do not expect to find large differences in the distances between partners in different areas. Fourth, the distance to family members might influence the distance between partners before living together. Swedish men tend to live closer to their parents than Swedish women do (Brandén and Haandrikman, 2013; Malmberg and Pettersson, 2007), and couples with children tend to live closer to the paternal than to the maternal grandparents (Løken et al, 2013). For the present study, I expect that spatial homogamy is strongest in urban areas and for people living close to family members, but that distances between partners before co-residence are longer for mobile individuals.
List of hypotheses

1. In contemporary Sweden, partner choice is still characterized by distance decay.
2. The distance between partners before co-residence has increased over the last two decades.
3. Higher socio-economic status is related to increased distances between partners before co-residence.
4. With increasing age, distances between partners decline.
5. Spatial homogamy is stronger for single parents and those living with their parents prior to union formation.
6. The higher the level of urbanization, the lower the mean distances between partners before co-residence.
7. Individuals who are relatively mobile will have longer distances to their partner prior to union formation.
8. Spatial homogamy is strongest for people living close to family members.
9. There are no large differences in spatial homogamy across different areas.

Data and method

I used register data from the PLACE database, which is administered by Statistics Sweden and managed at Uppsala University, and includes all registered individuals in Sweden for the period 1990-2008. PLACE contains a wide range of variables, including demographic and socio-economic features together with information on residential history. Moreover, it has excellent geographical attributes, namely location coordinates.
for each 100 by 100 meter square, implying that analyses can be done independently of administrative borders.

In Swedish registers, individuals are registered at properties (fastigheter in Swedish) rather than in households. I define a couple as two individuals living in the same property who are either married to each other or have a common child. Individuals who cohabit without having a common child cannot be captured. In PLACE, place of residence is approximated by the geographical coordinates of the 100 by 100 meter square in which the property is registered.

As I am interested in distances between partners before they move in together, I chose to focus on new couples and the distances between their previous addresses. Given the definition issues discussed above, I limited the study to couples who got married, or who had a child together as cohabitants. The procedure for selecting couples was based on a transition in family position. Those who were linked to each other through both living in the same property and marriage or a common child in a certain year but were not linked to that partner through marriage or a common child in the previous year were selected. For each couple, I then went back year by year, until 1990 at the earliest, to find the time when the two partners did not live in the same square. In the year before co-residence in the same square, I measured the Euclidean distance between the partners’ addresses. If two individuals lived in the same square before they became a couple, the timing of co-residence is mistakenly measured prior to the start of actual co-residence. However, the determination of couples is not affected. Couples for which one or both partners lived abroad in the year before cohabitation were excluded from the analysis, as, in order to measure the distance between partners, both addresses needed to be in
Sweden. A last limitation is that I only measured transition to marriage or having a child with a cohabitant; I did not know if a person had been married before or had had children with another partner. In the analysis, I do control for age on first living together and previous household position.

**Table 1** Data and couple selection characteristics.

<table>
<thead>
<tr>
<th>Selection year</th>
<th>Year in which persons started living together</th>
<th>Selected because of marriage</th>
<th>Selected because of cohabiting with common child</th>
<th>Total included N</th>
<th>Excluded cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>1990-1996</td>
<td>31,612</td>
<td>46,646</td>
<td>78,258</td>
<td>9,618</td>
</tr>
<tr>
<td>2002</td>
<td>1990-2002</td>
<td>42,364</td>
<td>58,588</td>
<td>100,952</td>
<td>6,384</td>
</tr>
<tr>
<td>2008</td>
<td>1990-2008</td>
<td>49,410</td>
<td>64,032</td>
<td>113,442</td>
<td>4,546</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1990-2008</td>
<td>123,386</td>
<td>169,266</td>
<td>292,652</td>
<td>20,548</td>
</tr>
</tbody>
</table>

*Note:* 20,548 cases out of 313,200 or 6.5% of all individuals were excluded because they were co-residing with their partner for the whole period until the selection year.

I selected three years for data analysis, 1996, 2002 and 2008, resulting in 313,200 individuals or 156,600 new couples, who either married (42%) or had a child while cohabiting (58%) in the selection year. The numbers of individuals included for each selection year, by selection mechanism, is displayed in table 1. Figure 1 shows the distribution of the years in which couples started living together, for each selection year.

On average, partners lived together for 2.7 years before they either married or had a child together. After one year, 28% had got married, and within two years, 59% had (only taking into account those who eventually married). In comparison, 22% of couples had a child within a year after moving in together, and 59% did so within two years. Shorter
housing histories are available for those selected in earlier years. Correspondingly, the proportion of partners not captured because they started living together before 1990 ranges from 11% for those selected in 1996, to 6% for 2002 and 4% for 2008 couples. The total number of individuals analyzed was 292,652.

**Figure 1.** Year of co-residence by selection type and selection year, as included in the study

![Figure 1](image)

*Source: Swedish register data, author’s calculations*

The method centers on couples as units of analysis, thereby recognizing the mutual nature of partner choice. Each record includes (1) variables to describe the man; (2) variables to describe the woman; and (3) variables describing the couple, as described
below. The modelling strategy consisted of multiple regressions explaining the distance between partners before co-residence as the dependent variable. Two regression models are specified, where the one for men uses predictors of types (1) and (3), while the one for women uses predictors of types (2) and (3). In order to separate the geographical effects from the socio-economic and demographic indicators, stepwise regressions are conducted. The choice of the variables included in the analysis was inspired by previous findings and the rich geographical variables available in PLACE.

To test how spatial homogamy has developed over time, the year in which couples started to co-reside was included. In terms of socio-economic class, level of education, income and whether the person was in education were included. Level of education was measured in June of the year before a person started living with a partner, and was categorized as primary school (nine years of schooling), upper secondary school (an additional two or three years), and tertiary education. Income was also measured in the year before co-residence, and includes the total income from employment and self-employment. The variable in the analysis represents relative income: very low or missing income (very low meaning up to 133,800 SEK/14,150 euro per year), medium income (133,800-214,600 SEK/14,150-22,700 euro per year) and high income (more than 214,600 SEK/22,700 euro per year). An unknown number of young people in Sweden, especially students, are believed not to be registered at the right address just after leaving home (Statistics Sweden, 2008). If these people are wrongly registered at their parents’ address, for instance, this could bias the distances measured in this paper. Therefore, an indicator for whether a person received student allowances, either as a loan or as benefits,
in the year the person started to co-reside, was included, as an approximate indication of whether that person was in education.

The demographic indicators incorporated were age, household position, and marital status. Age was measured in the year the person started living with a partner, and was included as a categorical variable. Household position in the year before moving in with a partner was categorized as living with parents, living as a single parent, or living in another household position, including living alone. Marital status was measured in the year the couple started living together, distinguishing those who immediately married from those who did not.

To capture possible geographical influences on spatial homogamy, five indicators were included: country of birth, place of residence before co-residence, degree of urbanization of address before co-residence, residential mobility, and distance to parents. First, country of birth was categorized as born in Sweden, born elsewhere in Europe or born outside Europe. Second, the area in which people lived before co-residence was included, as this might reveal regional cultural differences in distances to partners. Area of residence was approximated by local labor markets, a Statistics Sweden geographical unit that uses annual commuting patterns between municipalities and is loosely based on the ideas of Central Place Theory (Öberg and Springfeldt, 1991; Statistics Sweden 2010). Labor market areas are seen as more or less independent of labor supply and demand. For this study, I used the classification from the year 2000 and applied it to the municipality of residence before co-residence for all years of observation. Third, degree of urbanization of the property in the year before co-residence was based on a unique measurement of the radius of the circle centered on an individual in which 20,000 people
live, calculated for each 100 by 100 meter square in the whole country using the EquiPop software (Östh et al, 2014). I chose to use this definition rather than other measures such as the more widely used OECD typology (OECD, 2010). The latter defines degree of urbanization for each municipality, based on a combination of population density and the presence of urban centers, and would imply that, apart from Stockholm, Gothenburg and Malmö, the rest of Sweden is rural. To capture the heterogeneous nature of rural areas, I created this new urbanization index. Five categories were used in the analysis: urban areas, areas adjacent to urban areas, accessible countryside, peripheral countryside and remote countryside, based on the distance in which 20,000 people are captured – respectively less than 11 km, 11-23 km, 23-48 km, 48-93 km and more than 93 km.

A mobility variable was included to measure the extent to which individuals have access to a larger partner market. The variable measures whether a person was living in a different county (there are 25 Swedish counties, or län in Swedish) five years before the year that the person started to co-reside, to indicate a certain degree of residential mobility. Finally, the distance to a person’s mother’s address in the year of co-residence was included. If the address of the mother was not available, the father’s address was taken instead (as female life expectancy is longer than male life expectancy). The Euclidean distance between the geographical coordinates of the addresses of the parent and the child was then calculated.

**Results**

To get an idea of the extent of spatial homogamy in Sweden, figure 2 shows that the percentage distribution of distances between partners before co-residence is extremely
skewed: most couples live very close to each other before they start living together, while only a few live a long distance apart. This figure confirms hypothesis 1 that, in contemporary Sweden, partner choice is characterized by substantial distance decay.

Table 2 shows mean and median distances between partners before co-residence for the period under study. The mean distance between partners before co-residence was 57 kilometers, while half of all partners lived within 9.2 kilometers of each other.

**Table 2** Indicators of spatial homogamy for the period 1990-2008.

<table>
<thead>
<tr>
<th></th>
<th>Included because of marriage</th>
<th>Included because of having a child with cohabitant</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean distance between partners before co-residence</td>
<td>65.4 km</td>
<td>51.0 km</td>
<td>57.0 km</td>
</tr>
<tr>
<td>Median distance between partners before co-residence</td>
<td>10.6 km</td>
<td>8.2 km</td>
<td>9.2 km</td>
</tr>
</tbody>
</table>

About 14% of all couples lived within one kilometer of each other before co-residing, and 8% of these lived in the next 100 by 100 meter square. The longest distance between two partners was 1,417 kilometers – a couple of whom one partner lived in Kiruna in northern Lapland and the other lived in southern Malmö before they moved in together. The level of spatial homogamy varies by selection mechanism: those who were included in the study because of marriage lived further apart than those included because they had a child while cohabiting.
Figure 2. Percentage distribution of the geographical distance between partners before co-residence, 1990-2008.

Figure 3 shows that the distance between partners before co-residence has increased over time, thereby confirming hypothesis 2, although the increase has not been linear and many fluctuations have taken place over the last two decades. It is also evident that, over the whole time period, distances between partners before living together for those who were selected because they married have been consistently higher than distances for those who had a child together while cohabiting.

Unfortunately there are no recent studies for Sweden to use for comparison, but the median distance of 9 kilometers before co-residence could be compared to the median distance of 6 kilometers that was found for couples who started to live together in 2004 in the Netherlands (Haandrikman et al, 2008a). Given the fact that Sweden is ten times
larger than the Netherlands, the median distance between partners found here could be perceived as relatively short, although the mean distance, influenced by the small number of very long distances, is much longer than the 23 kilometers found for the Dutch study, but is not unexpected given the much larger surface area of Sweden.

Figure 3. Median and mean distances between partners before co-residence, by year of co-residence and selection type.

The results of the multivariate regression analyses on the distance between partners before co-residence, with the log distance between partners as the dependent variable, are shown in table 3. Model 1 mainly contains socio-economic and demographic indicators to test hypotheses 2-5; the second model adds geographical variables to the explanation of spatial homogamy in Sweden, testing hypotheses 6-9. The model fit
Table 3 Regression results of the log distance between partners before co-residence, men and women*.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
</tr>
<tr>
<td>Constant</td>
<td>506.2</td>
<td>364.2</td>
</tr>
<tr>
<td>Selection because of having a child while cohabiting vs. marriage</td>
<td>-0.08***</td>
<td>-25.4</td>
</tr>
<tr>
<td>Year of co-residence</td>
<td></td>
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</tr>
<tr>
<td>1996-2000 vs. 1990-1995</td>
<td>-0.01*</td>
<td>2.4</td>
</tr>
<tr>
<td>2001-2004 vs. 1990-1995</td>
<td>0.02***</td>
<td>5.7</td>
</tr>
<tr>
<td>2005-2008 vs. 1990-1995</td>
<td>0.04***</td>
<td>12.6</td>
</tr>
<tr>
<td>Educational level before co-residing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary vs. upper secondary</td>
<td>-0.02***</td>
<td>-7.4</td>
</tr>
<tr>
<td>Tertiary vs. upper secondary</td>
<td>0.04***</td>
<td>13.8</td>
</tr>
<tr>
<td>Educational level missing</td>
<td>0.00</td>
<td>-8.0</td>
</tr>
<tr>
<td>Income before co-residing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low or missing income vs. medium income</td>
<td>0.02***</td>
<td>5.0</td>
</tr>
<tr>
<td>High income vs. medium income</td>
<td>0.03***</td>
<td>7.2</td>
</tr>
<tr>
<td>Age at co-residence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;23 vs. 24-28</td>
<td>-0.03***</td>
<td>-8.5</td>
</tr>
<tr>
<td>29-34 vs. 24-28</td>
<td>0.00</td>
<td>-1.0</td>
</tr>
<tr>
<td>35-45 vs. 24-28</td>
<td>-0.02***</td>
<td>-4.8</td>
</tr>
<tr>
<td>46-55 vs. 24-28</td>
<td>0.00</td>
<td>0.8</td>
</tr>
<tr>
<td>56-65 vs. 24-28</td>
<td>0.01***</td>
<td>4.1</td>
</tr>
<tr>
<td>&gt;65 vs. 24-28</td>
<td>0.01***</td>
<td>4.2</td>
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</table>
Table 3 (continued)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Men</th>
<th></th>
<th>Women</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 2*</td>
<td>Model 1</td>
<td>Model 2*</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>t</td>
<td>B</td>
<td>t</td>
</tr>
<tr>
<td>Household position before co-residence</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Living with parents vs. living alone or other</td>
<td>0.10***</td>
<td>33.5</td>
<td>0.11***</td>
<td>39.7</td>
</tr>
<tr>
<td>household position</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single parent vs. living alone or other household</td>
<td>0.00</td>
<td>-0.6</td>
<td>0.01*</td>
<td>2.0</td>
</tr>
<tr>
<td>position</td>
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</tr>
<tr>
<td>Receiving study allowances vs. not receiving</td>
<td>0.05***</td>
<td>15.3</td>
<td>0.02***</td>
<td>7.2</td>
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<tr>
<td>allowances</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Married in year of living together vs. unmarried</td>
<td>-0.03***</td>
<td>-9.4</td>
<td>-0.02***</td>
<td>-7.7</td>
</tr>
<tr>
<td>Country of birth</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Europe (outside Sweden) vs. Sweden</td>
<td>-0.02***</td>
<td>-6.6</td>
<td>-0.01***</td>
<td>-4.9</td>
</tr>
<tr>
<td>Outside Europe vs. Sweden</td>
<td>-0.02***</td>
<td>-5.7</td>
<td>-0.01***</td>
<td>-3.6</td>
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<tr>
<td>Degree of urbanization before co-residence</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban area vs. area adjacent to urban areas</td>
<td>-0.09***</td>
<td>-29.9</td>
<td>-0.05***</td>
<td>-16.2</td>
</tr>
<tr>
<td>Accessible countryside vs. area adjacent to urban</td>
<td>0.01*</td>
<td>2.0</td>
<td>0.00</td>
<td>-0.5</td>
</tr>
<tr>
<td>area</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peripheral countryside vs. area adjacent to urban</td>
<td>0.00</td>
<td>0.0</td>
<td>0.00</td>
<td>1.1</td>
</tr>
<tr>
<td>area</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remote countryside vs. area adjacent to urban area</td>
<td>0.01*</td>
<td>2.4</td>
<td>0.00</td>
<td>0.7</td>
</tr>
<tr>
<td>Residential mobility: Living in another county 5</td>
<td>0.12***</td>
<td>43.5</td>
<td>0.13***</td>
<td>46.4</td>
</tr>
<tr>
<td>years ago vs. same county</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distance to parents in year of co-residence</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;5 km vs. 25-100 km</td>
<td>-0.19***</td>
<td>-48.6</td>
<td>-0.23***</td>
<td>-63.4</td>
</tr>
<tr>
<td>5-25 km vs. 25-100 km</td>
<td>-0.09***</td>
<td>-23.4</td>
<td>-0.11***</td>
<td>-30.7</td>
</tr>
<tr>
<td>&gt;100 km vs. 25-100 km</td>
<td>0.04***</td>
<td>11.5</td>
<td>0.06***</td>
<td>16.6</td>
</tr>
<tr>
<td>no parents alive or in Sweden vs. 25-100 km</td>
<td>-0.07***</td>
<td>-18.2</td>
<td>-0.08***</td>
<td>-22.0</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>0.023***</td>
<td></td>
<td>0.094***</td>
<td></td>
</tr>
</tbody>
</table>

* Model 2 also controls for labor market areas. The coefficients are displayed in figure 5.
statistics show that the explanatory power of the model greatly increases when geographical attributes are added to the model, especially for women, but that socio-economic and demographic characteristics of partners, together with changes over time, are also significant in explaining distances between partners before co-residence in Sweden.

The first model shows that there has been a significant increase over time in distances between partners before co-residence, although this is only true for the first decade of the 21st century and not for the 1990s, thereby partly confirming hypothesis 2 that spatial homogamy has decreased over time. The increase in distance has been greatest for the most recent period of 2005-2008. Those included in the study because they had a common child while cohabiting had lived closer to each other before co-residence than those selected because of marriage. In Sweden, virtually all couples cohabit before marriage, and most people eventually get married (Andersson and Philipov, 2002), with a marriage revival being observed in the period under study (Ohlsson-Wijk, 2011). Further inspection shows that those who married, when compared to those who had a child while cohabiting, were on average somewhat older, were better educated, had a higher income, more often lived alone than with their parents before they started living together, were more often born abroad, more often lived in the Stockholm area or in another urban area, were slightly less inclined to have moved from and worked outside the area in which they lived, and lived further from their parents – mostly confirming Bernhardt’s (2001) survey findings. Nevertheless, these individual characteristics are accounted for in the analysis, so the explanation must lie somewhere else. Swedes who marry have indicated that commitment to their partner, rather than any
practical reason, is important in their decision to marry, and those who marry are more often religious and family-oriented (Bernhardt, 2001). To speculate, those who choose to cohabit and to remain unmarried may start living together more easily and instinctively with a partner who they meet close by, while those who (eventually) marry might make a more conscious decision, given their labor market attachment and family ties to given locations (following Baker and Jacobsen (2006), and Fischer and Malmberg (2001)).

Based on previous studies, I expected that those with higher socio-economic status would find life partners at longer distances (hypothesis 3). Without geographical features in the model, this is partly the case. Less well educated men and women find partners at significantly shorter distances, while the better educated find partners at longer distances. However, when geographical indicators are added to the model, I find no significant effects on spatial homogamy for better educated women and only a small effect for men, though the effects for the less well educated as compared to those with average education remain. Taking into account geography (model 2), men with higher incomes find partners at longer distances, while women with higher incomes meet partners closer to home, though this effect is small; this is in contrast to previous studies. It is also unexpected that, in model 1, having a low income is associated with finding a partner further away.

The demographic correlates show an irregular pattern. Both men and women who start co-residence at the youngest age, younger than 24, find partners at shorter distances. Men who start living with a partner between the ages of 29 and 45 live closer to their partners than those who start to co-reside between the ages of 24 and 28, while late cohabiters find partners at significantly longer distances. For women, co-residence from
age 29 onwards is related to finding a partner at a significantly longer distance. These findings are contrary to hypothesis 4 that the distance between partners decreases with increasing age. One possible explanation could be that the studies that influenced this hypothesis were based on bivariate analyses (Clegg et al, 1998; Coleman and Haskey, 1986; Haandrikman et al, 2008a). Another could be that, with age, women in particular place more value on socio-economic status in partner choice (Schwarz and Hassebrauck, 2012), which may imply longer distances to find such a partner. Third, women more often move longer distances than men, because men (who are generally a few years older than their partners) are more established in the labor and housing market than women of a similar age (Bielby and Bielby, 1992; Mulder and Malmberg, 2012), and because of a gender culture that supports the systematic adaptation of women to their partners’ careers (Brandén and Haandrikman, 2013).

Single mothers find new partners at shorter distances than those living alone before moving in with a partner, as expected (hypothesis 5), while single fathers are slightly more inclined to find partners further away. This would seem to be related to the fact that mothers live closer to their children after separation (Stjernström and Strömgren, 2012). Living in the parental home before moving in with a partner is an important explanatory factor for spatial homogamy: living with one’s parents is associated with significantly longer distances to partners. This is in contrast to hypothesis 5 and the expectations and findings from the Netherlands, where, in a bivariate analysis, those living with their parents were more likely to find partners at shorter distances (Haandrikman et al, 2008a). Given the rural nature of the country, many Swedish youngsters living with their parents will obviously have to travel much longer distances
to find partners than their peers in densely populated areas. On the other hand, young people are known to be wrongly registered (Statistics Sweden, 2008), so part of this result might be the combined effect of incorrect registrations, though I have controlled for students. Unsurprisingly, I find that those enrolled in higher education find partners at longer distances than those who are not enrolled. These students might meet their partners in the towns where they study; in these places, many people of different origins come together and form a big dating pool. Lastly, those getting married in the same year as they started living together are more likely to have found their partners at shorter distances than those who do not get married in the same year. Further statistical inspection reveals that these partners are more often migrants, were older when they started living together, more often lived alone instead of living with their parents before union formation, and more often lived in Stockholm. Spatial homogamy might be stronger for these individuals, who may be more inclined to search for commitment, prompted by cultural background or for other reasons that are not revealed by these data.

Residential mobility, degree of urbanization and the nearness of parents are the most important explanatory geographical factors in explaining spatial homogamy, and lead to a substantial increase in the explanatory power of the model. Corroborating previous studies and confirming hypothesis 6, spatial homogamy is strongest in urban areas, while men in the remote countryside find partners at longer distances. The effect of the mobility variable is as expected (hypothesis 7): the more mobile individuals are, the longer the distances at which they find a partner. This analysis, furthermore, shows a strong association between geographical closeness to parents and spatial homogamy. The closer the parents, the shorter the distance at which a partner is found (confirming
hypothesis 8). Living close to one’s parents might indicate that there is a social norm of finding a partner from the same region. On the other hand, those who do not have their parents nearby, because their parents are deceased or live abroad, also tend to find partners nearby. The same applies to partners born outside Sweden. These people might have geographically restricted networks within Sweden, and as a result also choose partners from a geographically limited pool of eligible partners.

**Figure 4.** Regression results of the log distance between partners before co-residence for labor market areas*.  

* The map shows standardized betas, corrected for all other variables as listed in Table 3.
Figure 4 shows the standardized betas (B) of the regression analysis for the different labor market areas of Sweden on a map. The most remarkable finding is that both men and women in northern areas find partners at significantly longer distances than men and women in the Stockholm region, even when taking socio-economic, demographic and other geographical factors, such as population density, into account. Spatial homogamy is strongest in the area west of Stockholm and in Skåne in the south. We may conclude that there is a north-south divide, with longer distances between partners in the north and shorter distances in the south, but there does not seem to be a clear distinction in distances between partners between Svealand and Götaland. The exceptions in the north are that there are relatively short distances between partners for men in Haparanda near the Finnish border and for both men and women in the most northern area, Kiruna. This might be related to linguistic preferences, or to concentrations of people in small places surrounded by almost uninhabited areas. Southern Sweden and the area known as the bible belt are generally seen to be slightly more traditional in terms of gender relations and demographic behavior, and we also see that spatial homogamy is strongest in those areas, thereby partly refuting hypothesis 9.

Conclusions and discussion

This study has shown that geography still matters in present-day partner choice in Sweden. Although distances between partners before co-residence have increased over time, the level of spatial homogamy is still relatively high. Partners are, in general, still found close to home, most probably because most people still study, work and spend most of their leisure time close to their home base. We can certainly not speak of the
death of distance so far as partner choice is concerned. On the other hand, recent changes in mobility and technology and, in particular, the enormous increase in internet use are likely to have led to slight increases in distances between partners, but only in the last couple of years.

Although the choice of a partner is a very personal decision, the kinds of partner choices that are made reflect the intensity of ties between and within groups in society. Changing patterns of partner choice signal social change, such as the integration of small communities into larger ones (Knippenberg and De Pater, 1988), weaker regional identification, and increasing social openness and integration (Smits et al, 1998). Increasing distances between partners may suggest that localities are increasingly connected, and that cultural and social distances between groups are declining. The results of mapping the geographical dimensions of partner choice reveal a quite local pattern of contacts, which shows that the immediate surroundings of individuals are still crucial in shaping social relationships.

Geographical attributes of individuals, especially the degree to which individuals are residentially mobile, the degree of urbanization of their surroundings, and the nearness of parents, explain the major differences in distances between partners in new couples. Distances to partners are shortest in urban areas, for less mobile partners, for people whose parents either live nearby or are not in Sweden, and for those born abroad. The longest distances are found for those who are geographically mobile, for men who live in the remote countryside and for those living far away from their parents. These findings suggest that the place where one meets one’s future partner is largely determined by geographical opportunities. In addition, shorter distances between partners, such as
those found in the south and in the Swedish bible belt, might reflect a cultural preference and/or cultural norms to choose a partner from the same region.

In addition, socio-economic and demographic characteristics play a role in the varying levels of spatial homogamy. Spatial homogamy is strongest for single mothers, young cohabiters, the less well educated or those with low incomes, women with higher incomes, and migrants. Distances to partners are longest for people who start co-residing at later ages, those moving directly from the parental home, the better educated, students and men with higher incomes.

A study that linked actual meeting places to geographical distances between partners would add much to the explanations found in this paper. It would also be interesting to examine whether spatial homogamy is related to relationship stability, and how spatial homogamy relates to other forms of homogamy. Further research would, ideally, study all couples who move in together, including those who separate later or who do not have children. Another avenue to be continued pertains to the gender differences in residential mobility related to union formation. Swedish women leave the parental home earlier, study more often than men, and move more often, and in the Nordic countries youngsters tend to live on their own when they leave the parental home instead of forming a union (Mulder, 2009; Mulder and Wagner, 1993). Those who do leave the parental home to form a union find partners at longer distances, and these couples are mostly less well educated and relatively older. The distance moved by men and women to their new place of residence, and the socio-economic and other ties to their areas of residence, has not been studied much, though focusing on the association
between gender regimes and migration behavior could contribute to the family migration literature.

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