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Socio-economic modernization and enduring language barriers: choosing a marriage partner in Flemish communities, 1821–1913

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ABSTRACT

In this article, we study how potentially conflicting forces of socio-economic modernization and enduring language barriers influenced one of the most intimate acts of social interaction: marriage. In the period during which Belgium underwent social and economic modernization – often thought to have diminished barriers between social groups, increasing the likelihood of social heterogamy – linguistic barriers remained strong. The intriguing question is, what happens if socio-economic modernization coincides with persistent linguistic cleavages. We will study this by looking at marriage formation in communities in the province of (contemporary) Flemish Brabant and the Brussels Capital Region. We ask: How large were the temporal and municipal variations in homogamy by social status in the period 1821–1913? And can modernization and the existence of linguistic divisions explain these variations? We use two types of data: couple data from civil registration records in Flemish Brabant 1821–1913 (N = 333,729), and, for some analyses, context data on the municipality at the time of marriage to a shorter period, 1859–1910, and thus a lower number of marriages (N = 270,151). We find that during modernization a shift took place from homogamy on fathers' status to homogamy on groom's status, and we find partial support for the effect of language barriers.

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Social homogamy; marriage; cross cutting circles; ethnicity; language

1. Introduction

In this article, we study social homogamy – i.e. marriage patterns by social status – in linguistically split Belgium. We will do so for what might be called the long nineteenth century – the years 1821–1913 – a period of social and economic modernization. The degree to which people marry people who are unlike themselves is important 'because ideas, resources, and group affiliation flow through networks. If we are connected mainly

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The Flemish marriage certificates were collected by 150 volunteers from the General State Archives in Leuven, under the leadership of Patrick Trio. The community indicators were collected as part of the European Research Council, Advanced Grant, no: 230,279, 2009–14 'Towards Open Societies? Trends, Variations and Driving Forces of Intergenerational Social Mobility in Europe over the Past Three Centuries'. As indicated in the text most of the community variables used in this paper come from the database 'Historische Databank van Lokale Statistieken – LOKSTAT', University of Gent, Dept. of History, and we are grateful for its curators, profs. E. Vanhaute and S. Vrielinck, for allowing us to make use of them, see for this database <http://www.hisstat.be>. We also like to thank the audiences of the European Social Science History Conference in Vienna, April 23–26, 2014 and in Valencia, March 30–2 April 2016 for their comments. We are grateful for the helpful comments by the anonymous referees of this journal, as well as to Chris Gordon for polishing the text.

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to people much like ourselves, we can see a very limited social horizon.’ (Smith, McPherson, & Smith-Lovin, 2014, p. 433). A marriage not only constitutes a union between two individuals, it is also an act connecting two families and two sets of friends and acquaintances. As these in turn have social ties, a marriage might function as a bridge between communities. Mixed marriages can be seen as an indicator of integration between two groups.¹ In extreme cases, mixed marriages can even be a means of reducing violent social conflicts, including ethnic ‘cleansing’ and civil war in general (Monden & Smits, 2005; Smits, 2010).

Social homogamy has been a topic of numerous studies. Most of these relate the likelihood of marrying within one’s own status group to individual characteristics, or study differences between countries, or changes over time. Social homogamy has seldom been studied against the background of other cleavages in society (but see Bras & Kok, 2005; Lippényi, Van Leeuwen, Maas, & Óri, 2016). Such cleavages, for example between religious, ethnic, or culturally different groups, might further social homogamy if they coincide with status differences. But they might also intersect status borders. In this case of crosscutting circles, social homogamy might actually be weakened (Blau & Schwartz, 1984).

Especially in Belgium, linguistic cleavages might be relevant. Three languages are spoken: French and Dutch (Flemish), as well as German in a small area bordering Germany. Speakers of French and Flemish reside in two distinct regions, the Walloon provinces (in the Southern part of Belgium) and Flanders (in the Northern part), separated by a linguistic border. The province of Flemish Brabant (contemporary division), from which our data stem, was largely Flemish-speaking territory in the period we study. At the heart of this province, however, we find the Brussels Capital Region – a separate administrative entity, but part of our dataset – where French speakers were more prevalent. Language barriers strongly affected everyday life. De Metsenaere (1988, 1996) noted that during the nineteenth century, inhabitants of Brussels lived to a large extent in their own language communities (with the exception of just one neighbourhood, the Marollenwijk). No more than a third of all Flemish-speaking inhabitants of Brussels lived in a bilingual neighbourhood, and where they did, they were clustered in the same ‘language streets’.

It is well known that regional language barriers, in combination with political fractures, have sometimes made Belgium’s social, cultural, and political life a little uneasy. The complexity has to do with the fact that both linguistic groups are split across many political parties. Much energy has to be invested in order to keep community, regional, and national services going, due to conflicts that would not exist without the linguistically rooted identity issues. Deep cleavages exist in particular between the French- and Flemish-speaking communities. As recently as 2010, a mere 0.48% of prenuptial agreements signed in Belgium (204 out of 42,500) were between a Belgian native speaker of Flemish and a Belgian native speaker of French.² The chances of marrying an immigrant are distinctly higher than the chances of marrying across the linguistic divide.³ The Belgian language barrier is nowhere greater than in Brussels, a city surrounded by Flemish-speaking communities. Brussels has a majority of French-speaking inhabitants, who stand at times on uneasy foot with the Flemish minority.

Whereas linguistic barriers remained strong during 1821–1913, at the same time both Belgium as a whole and the province of Brabant underwent a process of rapid modernization. Belgium was the first industrial nation on the European continent – and indeed the second industrial nation on earth after Britain – and in the course of the long nineteenth-century modernization accelerated, powered by the rapid increase in the use of steam power. This period saw a decrease in the proportion of the population working in agriculture, and an increase in the dissemination of letters, telegrams, newspapers, and other forms of communication, and, last but not least, rapid growth in the size of the railway network. These modernization patterns are often thought to have diminished barriers between social groups, increasing the likelihood of social heterogamy (e.g. Van Leeuwen & Maas, 2010).

In this article, we are keen to see how these possibly conflicting forces of socio-economic modernization and enduring language barriers influenced one of the most intimate acts of social interaction: marriage. We will study marriage formation in the context of municipalities, and ask:

How large were the temporal and municipal variations in homogamy by social status in the Belgian province of Flemish Brabant in the period 1821-1913?

Can modernization and the existence of linguistic divisions explain these variations?

We feel we add to the literature by studying an understudied but interesting question: What happens if modernization processes coincide with persistent linguistic cleavages? To disentangle this, we use a multi-level approach, with measured salient features of communities during a period of socio-economic modernization.

2. Theory

To develop hypotheses, we first discuss economic and cultural considerations influencing the choice of a marriage partner in the historical context of the nineteenth and early twentieth century. We then go on to discuss structural constraints on the marriage market, paying special attention to the issue of crosscutting circles.

For men and women about to marry, an important concern relates to expectations of running a household together. In Western Europe certainly, it has been common to postpone marriage until a couple had enough savings to live on their own. Few individuals in the Western world will have married for economic considerations alone, but somewhere in the process of finding a marriage partner, economic considerations are likely to have filtered in. An important part of the economics of mate selection pivots on future earnings capacities: Is the couple likely to be able to maintain their desired standard of living? Marrying a partner with the same or a higher-social status – as a marker of lifetime earnings – is thus an understandable wish.

In a traditional society, the best predictor of the future earnings capacity of young adults was likely to be that of the family of origin. The status of the father of the groom was an important predictor of the success of the groom later in life, whereas in industrializing societies the status of the groom at marriage increasingly became more important as the better predictor of his success later in life (Treiman, 1970; for reviews see Breen, 2004; Ganzeboom, Luijkx, & Treiman, 1989; Knigge, Maas, & van Leeuwen,

2014; Van Leeuwen & Maas, 2005, 2010; Van de Putte, 2005; Zijdeman & Maas, 2010). In a farming village, a father with a farm is a strong predictor of the future well-being of the son who inherits the farm, and of the woman marrying that son: land and the knowledge of how to profit from the use of that land, are assets that are handed over from generation-to-generation, and which are birth rights, so to speak, for some youngsters. But in a society where a growing proportion of the population does not work on the land but in an office, a shop, or a factory, these 'birth rights' are less important. If a young woman, and her parents, consider a young male suitor from a farming background who has just started his occupational career as a factory worker or clerk, what they take into consideration is not where he came from but where he will go to. The bride and her parents are likely to use the groom's own 'achieved' status instead of his 'ascribed' status – i.e. that of his father – to evaluate his future material prospects. This brings us to hypothesis 1 (see also Figure 1): *During modernization a shift took place from homogamy on fathers' status to homogamy on groom's status.*

Apart from economic considerations, cultural ones, too, are important in choosing a marriage partner. People tend to look for a partner from among their own status group, for cultural reasons: compatible opinions, common friends, shared childrearing practices, familiar lifestyles, and leisure activities (Bourdieu, 1984; Bull, 2005; Dribe & Lundh, 2005; Jacobs & Furstenberg, 1986; Kalmijn, 1991, 1994; Matthijs, 2001; McPherson, Smith-Lovin, & Cook, 2001; Van de Putte, Oris, Neven, & Matthijs, 2005; Van Leeuwen & Maas, 2010). They do so, arguably, also because of social pressure: 'The individuality of the couple, or rather its tendency towards individuality, is crushed by the family institution, and also by the social pressure exercised by the village community as a whole' (Segalen, 1983, p. 41). Indicative of this is that studies have found that, in those situations where parents were absent, due to a premature death or due to migration, people were more inclined to marry outside of their own class of origin (Billen, 2006; Bras & Kok, 2005; Pélissier, Rébaudo, van Leeuwen, & Maas, 2005; Van Leeuwen & Maas, 2002; van Poppel, de Jong, & Liefbroer, 1998).⁴

Modernization theory claims that, over time, cultural group differences have become smaller. In societies with better possibilities to travel and to communicate over larger distances, differences in attitudes and behaviour between status groups decrease and a common culture develops (Goode, 1964; Kalmijn, 1991; Knigge et al., 2014; Smits, 2003;

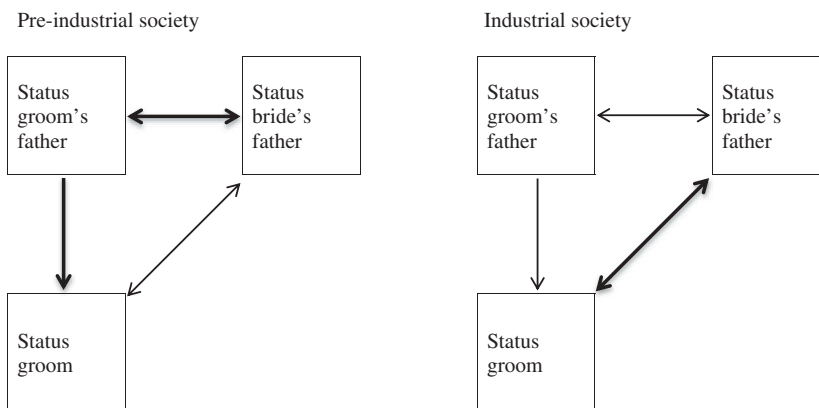


Figure 1. The effect of economic modernization on social homogamy.

Note: One-directional arrows indicate causal effects, two-directional arrows indicate selection effects.

Treiman, 1970; Uunk, Ganzeboom, & Róbert, 1996; Van de Putte, 2005; Zijdeman & Maas, 2010). When cultural differences between status groups become smaller, both the status of the family of origin and that of the groom become less meaningful for partner selection. They become less indicative of having similar lifestyles and opinions. At the same time, social pressure to marry someone from the same social circle has diminished: 'With industrialization, the traditional family systems are breaking down ... Elders no longer control the major new economic or political opportunities, so that family authority slips from the hands of such family leaders. The young groom can obtain his bride on his own, and need not obey anyone outside their family unit, since only the performance on the job is relevant for their advancement ... Thus industrialization is likely to undermine gradually the traditional systems of family control and exchange'. (Goode, 1964, pp. 108–109).

In line with this, modernization theorists (such as Treiman, 1970; see also Pélissier et al., 2005; van Poppel et al., 1998) reason that the more modern a society is in terms of mass communication and mass transport,⁵ the smaller the correlation between the occupational status of the father of the groom and the groom on the one side and the father of the bride on the other side become. This brings us to hypothesis 2 (see also Figure 2): *In municipalities with mass transport and mass communication both homogamy by father's status and homogamy by groom's status are smaller than in municipalities without mass transport and mass communication.*

The above hypotheses more or less tacitly assume that the pool of marriage candidates is unlimited. This is, of course, unrealistic since there might well be structural constraints (Blau, 1977; Blau & Schwartz, 1984; Catton & Smircich, 1964; Stevens, 1991). Blau in particular formulated propositions on the salience of such constraints as the size of a particular group in relation to that of other groups, and the degree of segregation. As to group size, Blau (1977, p. 21) surmised with regard to marriage patterns that 'the proportion of group members intermarried is an inverse function of group size' because members of large groups can more easily find a suitable marriage candidate among themselves whereas those belonging to small minority groups face greater difficulty in doing so. In the case of two groups, this is true by definition (a small number of intermarried couples forms a smaller proportion of a large group than of a small group).

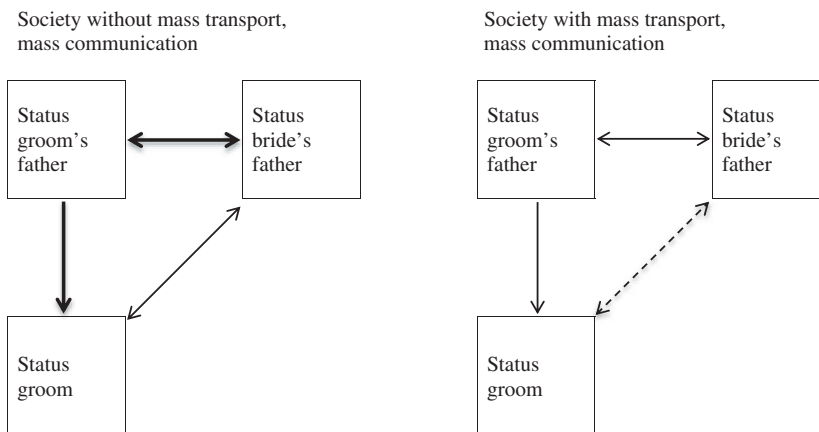


Figure 2. The effect of cultural modernization on social homogamy.

Note: One-directional arrows indicate causal effects, two-directional arrows indicate selection effects.

The effect of group size on homogamy is open to human intervention: people who have difficulty finding a partner within their own group might decide to keep on looking and to postpone marriage, or even refrain from marriage. Or they might decide to search and even migrate over longer distances (Lewis & Oppenheimer, 2000). In some instances, French-speaking inhabitants of Flemish Brabant faced the dilemma of marrying a Flemish-born partner, continue living in their community of residence unmarried, commuting or migrating over longer distances within Belgium, France, or even embarking on a transatlantic journey to find a French-speaking partner.

If individuals marry within their linguistically split and socially divided local marriage market, they might have to sacrifice a preference for someone of a certain social position to their preference for someone from their own language group that is to marry socially downward. If, on the other hand, individuals have a strong desire for someone from their status group and they cannot find such a person in the (language) community they were grown up in, they might have to sacrifice their same language preference. In some instances, Flemish-speaking inhabitants of Brabant faced the dilemma of either marrying downward someone with the same mother tongue, or of migrating and marrying someone of their social status who spoke French. In general terms, if individuals have a preference for homogamy on more than one dimension (e.g. social class and language) they will tend to be more heterogamous on either dimension than they would have been had they had only one preference. The reason for this is that there is less 'fruit to be picked' that meets both preferences, than that meets one preference alone, and thus one has to be less selective.⁶

Blau came to this insight following an observation by the German classic sociologist Simmel (1955) on the pattern and process of individualization of modern city life. Simmel understood this process to be one that saw a transition from a time of virtually total intersection of social spheres to one of increasing dissociation, making modern man less interwoven with the social fabric into which he had been born – or to phrase it differently, more individualistic. 'In modern society ... a person's multiple group affiliations constitute mostly crosscutting social circles and one's social position is at the intersection of numerous groups with largely different memberships. People live in a neighbourhood, have an occupation, belong to an ethnic group, work for a firm, are more or less educated, and have a socio-economic status, and most of their fellow members in these various groups and positions are not the same' (Blau, Becker, & Fitzpatrick, 1984, pp. 585–606). Based on the theory of the effects of crosscutting circles, we thus surmise: *If bride and groom were raised in a different language, both homogamy by father's status and homogamy by groom's status are stronger than if they were raised in the same language* (hypothesis 3, see also Figure 3).⁷ We thus assume that couples that crossed the language barrier, did so out of a desire to marry homogamously on other characteristics, notably social status.

3. The Belgian context

Before we test our hypotheses, we briefly describe salient features of Belgium, and specifically of the population to which our data relate. The province of Flemish Brabant is a mainly Flemish-speaking territory, but during the period of our study it encompassed the capital Brussels, in which French played an important role. Between the end of the eighteenth and the middle of the twentieth century, Brussels was the scene of a linguistic shift, whereby Flemish was gradually replaced by French. In Brussels, French became the language of prestige, associated with higher education, power, and social

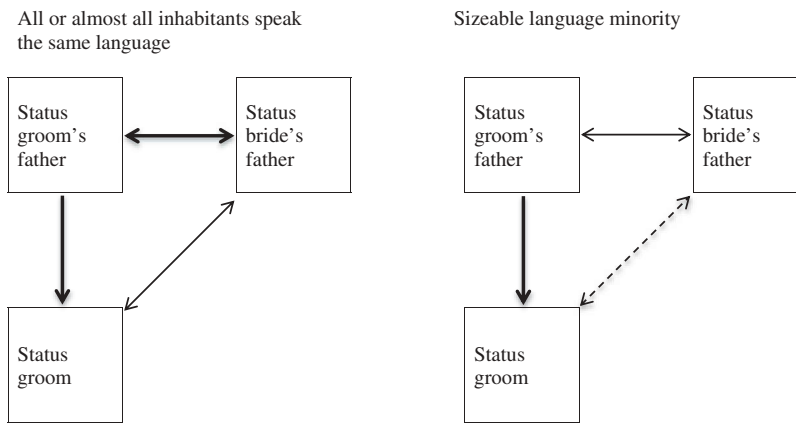


Figure 3. The effect of ethnic cleavages on social homogamy.

Note: One-directional arrows indicate causal effects, two-directional arrows indicate selection effects.

status. It had become the only official language of the country after Belgium's establishment in 1830 (when it became independent of the Netherlands, with which it had been united after the Congress of Vienna), and officially remained so until 1898. French was used in politics, finance, business, administration, law, education, and the press. While, during our period of interest, Brussels was a linguistically mixed city, housing substantially more Flemish than French speakers, speaking French formed a crucial precondition for upward social mobility (Billen, 2006, pp. 47–48; De Metsenaere & Witte, 1990).

The distribution of French and Flemish speakers varied by neighbourhood. In the rich neighbourhood of Ixelles, for example, in 1890 50% claimed to be exclusively French speakers, and just 10% used Flemish only. In the poor, more industrial neighbourhood of Sint-Jans-Molenbeek, the situation was reversed: here 11% identified as French speakers in 1890, and 61% claimed to speak Flemish only (De Metsenaere & Witte, 1990, pp. 35–36).

Belgium's population approximately doubled from 4.34 million in 1846 to 8.30 million in 1935 (Kendall, 1938, pp. 147–8). Flemish internal migration patterns in the nineteenth century were characterized by a 'colonization of the countryside by commuters (*pendelaars*)' rather than an *'exode rurale'* (Vanhaute, 2003, pp. 159–60; Govers & Go, 2009). Nevertheless, Brussels grew rapidly after Belgium's independence in 1830. From then on, the new Belgian political elite adopted an active policy to turn Brussels into the country's political, economical and financial centre. Alongside parliament, ministries, and legislature, Brussels came to house the industrial-financial elite (De Metsenaere & Witte, 1990, pp. 2–3). It also attracted many small companies (and individual servants) that provided services and goods to the growing number of civil servants, clerks, workers, and affluent citizens. The city became the country's centre for the production of luxury goods (De Metsenaere & Witte, 1990, p. 4).

In Flemish Brabant, industrialization took place during the so-called Second Industrial Revolution, from about 1890 onwards. We can distinguish six regions that developed differently: Pajottenland, Vilvoorde, Zenne and Zoniën, Hageland, Haspengouw, and Leuven. The two regions adjacent to Brussels – Vilvoorde and Zenne and Zoniën –

developed fastest, thanks to the strategic value of their canals, and to the proximity of Brussels's reservoir of workers and urban demand (Lefebvre & Buyst, 2007, pp. 47–54). Vilvoorde became a centre for the metal industry, the chemical industry, and other heavy industries. The region directly south of Brussels – Zenne and Zoniën – an area rich in forest and water – was a centre for wood-working, furniture, and paper industries. Leuven and Pajottenland also counted important industries, but over time they lost ground to the Vilvoorde and Zenne and Zoniën regions. Pajottenland accounted for 20% and Leuven 26% of all industrial jobs in the province of Flemish Brabant. In Pajottenland, however, the industrial sector could be classified as proto-industrial rather than industrial: here most employment was in textiles, which were mostly produced at home. Leuven, as the main city in Flemish Brabant, housed a relatively diverse industrial sector, with chemicals, food industry, alcohol and tobacco, leather and shoes, and building industries. While Vilvoorde drew new industries, however, Leuven's industrial sector continued to focus on more traditional products. Leuven also saw strong growth in the service sector, partly as a result of the expansion of the university. The regions furthest away from Brussels – Hageland and Haspengouw – were the least industrialized, and respectively housed 10 and 9% of all industries in Flemish Brabant. In Haspengouw, industrial employment was concentrated in the food industries, and especially in the production of sugar, which accounted for 60% of all employment in the industrial sector in this area. Hageland specialized in relatively simple wood-working and furniture production.

In the nineteenth-century Belgium's economy was characterized by a move away from agriculture. Belgium was the first European continental country to industrialize. Between 1846 and 1910 the proportion of the labour force working in the agricultural sector declined from 55% to 22% (De Brabander, 1981). However, these figures, which focus on farming as a principal income source, hide an underlying reality: overall, farming was no longer the main source of income for many people, but the majority of the Belgian population remained active in the agricultural sector. According to the census of 1846, around 64% of Belgian families were engaged in farming, while by the end of the nineteenth century this share had declined to 53% (Vanhaute, 2001, p. 22). While agriculture overall was productive, and harvests were good, the sector was also characterized by extreme fragmentation of land, a high proportion of rented farms, short leases, and high rents.⁸ These phenomena intensified over the course of the nineteenth century. Around 1900, the average farm size in Belgium was a mere 2.3 hectares, compared with 6 in France, 8 in Germany, and 12 in the UK. Two-thirds of farms were less than 20 hectares (Vanhaute, 2001, pp. 19–22).

Because farming often occurred on small plots, or even 'Lilliput farms' of less than 0.5 hectares, and profits were pruned away by high rents, many farmers were smallholders. Many of them were unable to sustain their families year round on the basis of the income from their farms alone and sought secondary employment in industry, or tried to earn extra income by helping out at larger farms during busy times, such as the harvest period (De Schaepdrijver, 2013, p. 16). In turn, landowners themselves were also mostly small-scale proprietors: the vast majority of landlords owned only one or two farms (Vanhaute, 2001, p. 36). Competition among small landowners drove them to extract higher and higher rents, and towards the end of the nineteenth century this drove agriculture into a crisis, in which smallholders occupied a precarious position with a low living standard. The conditions prevailing during World War I changed the position of

farmers for the better, however: the siege of Belgium and the interruption of international trade drove food prices up sharply, which benefited farmers.

Shortly after gaining independence in 1830, Belgium embarked on an ambitious infrastructure project. It started to develop a refined and wide-ranging network of railroads to bolster the economic and political development of the new nation state (De Block & Polasky, 2011, pp. 703–8). This aim was achieved by a cross-shaped design stretching out in all four directions from the centre and connecting all major industrial cities and towns, with secondary branches reaching out further into the hinterland. The early development of a distinctively dense network of railways enabled a growing population of Belgian industrial workers to continue residing in the countryside and commute to their work in mines and urban factories. Cheap railway tickets and housing loans for workers further contributed to a ‘hybrid landscape’ in which highly mobile Belgian labourers lived their lives between city and countryside (De Block & Polasky, 2011, pp. 312–314; De Schaepdrijver, 2013, p. 16; Laffut, 1998; Lamalle, 1953–77; Van der Hertten, 2004; Van der Hertten, Van Meerten, & Verbeugt, 2001).

The Belgian postal system developed rapidly too during the nineteenth century, with the number of post offices rising from 163 in 1840 to 486 in 1875. By 1928, the country had 1,686 post offices. From the moment the postal service had become a national operation, its political objective was to foster cultural and economic development, as well as to develop the ties between different communities and people (Struyf, 1958, p. 98).

4. Modernization and language developments based on our data

How did Belgium’s communities experience modernization? Figure 4(a) to 4d show in what contexts the marriages we study took place and how this changed over time. The figures show that Brussels capital was a world apart from other communities in Flemish Brabant – see, for example, Figure 4(a). At the start of the period for which we have community data (1859), marriages took place on average in smaller and larger municipalities in which a mere 3% of the population did not speak Flemish. Flanders, of course, is Flemish-speaking territory by and large. The percentage of non-Flemish speakers increased to about 10% in the last quarter of the nineteenth century, and remained more or less at that level. Brussels, on the other hand, had a sizeable Francophone community.

Brussels also had considerably more post offices, train stations, and of course inhabitants than the other Flemish communities in our data – see Figure 4(b–d). In the course of time, postal connections increased substantially in the capital, but also in the smaller communities in our sample in the first and last decades that we observe. Connectivity by train to the outside world was already fully developed in Brussels at the start of the period the graphs cover, but it increased sizeably in the other communities until 1880.

5. Empirical findings from previous studies

Many studies, of both contemporary and past societies, have shown that people are more likely to marry others from the same social class (Bull, 2005; Dribe & Lundh, 2005; Hout, 1982; Jacobs & Furstenberg, 1986; Kalmijn, 1991; Lazarsfeld & Merton, 1954; Maas, Leeuwen, Van, Péliissier, & Rébaudo, 2011; Matthijs, 2001; McPherson et al., 2001; Péliissier

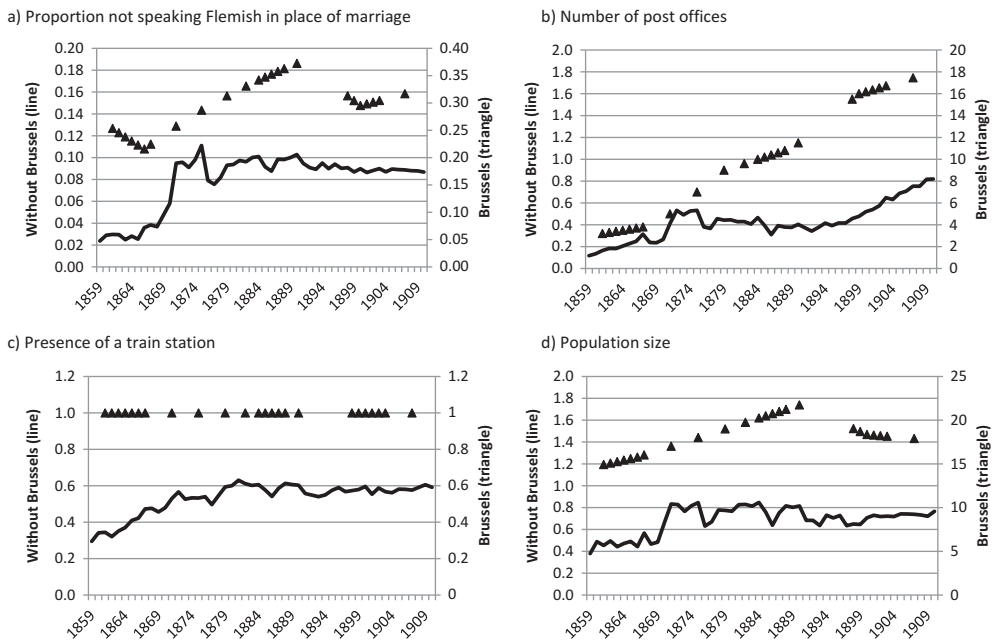


Figure 4. Contextual changes over time in Flemish Brabant (averaged over all marriages, $N = 49,332$, sources described in the data section).

et al., 2005; Smith et al., 2014; Van de Putte, 2003a; Van de Putte et al., 2005). In Belgium, as in other countries, historians have researched social homogamy less than homogamy by migration status and age (Alter, 1988; Jacquemin, 1994; Matthijs, 2001; Neven, 2003; Oris, 1995, 2000; Puschmann, Grönberg, Schumacher, & Matthijs, 2014; Van de Putte, 2003b; Van de Putte & Matthijs, 2001). Nonetheless, a few studies do address marriage patterns by social class. They study them in the context of high immigration and of changes in the labour market, notably the growth of industry. As we have noted, around 1800 Belgium was the most industrial nation on earth after Great Britain.

Van de Putte et al. (2005) studied a dozen Belgian villages and small towns in both French- and Flemish-speaking parts of the country. They paid particular attention to the effects of migration and language diversity on social homogamy and ‘found it difficult to interpret all these divergent patterns in terms of modernization’, arguing for a highly context-specific causality: ‘the whole exerts an influence over partner selection’ (p. 179, see also p. 217). But they do interpret the increase in social heterogamy in some localities as an effect of the influx of Flemish-speaking migrants into French-speaking communities. The French speakers preferred to marry down rather than to marry a Flemish migrant having the same social status (p. 216 *et passim*). Van de Putte, Oris, and Matthijs (2009) studied marrying out of the lower classes in a subset of these communities, i.e. in three Flemish cities (Aalst, Leuven, and Gent) and two Walloon cities (Verviers and Liège). They looked especially at whether marrying out was easier at any one time in the two most industrial, or ‘modern’, cities (Verviers and Liège) than in the other three less modern cities, and whether marrying out became easier over time as all five cities modernized. They concluded that it did not.

Virtually no historical studies relate observed social homogamy to its measured presumed determinants in the communities where the marriage partners reside. Bras and Kok (2005) form an exception. They study the Dutch province of Zeeland from 1796 to 1922. This Dutch region was populated by both Catholics and Protestants. Here the issue of crosscutting thus occurs not in the form of linguistic circles, but in the form of religious circles. In Zeeland, a substantial proportion – 30 to 40 % – of all brides and grooms married outside their own class, and, interestingly, the figure was higher in small municipalities with religious minorities, thus corroborating the effect of crosscutting circles on social homogamy. Zijdeman and Maas (2010) form another exception. For the same Dutch province, they observe the associations between the status of the groom and the status of his father on the one hand, and the status of the father of the bride on the other. In some municipalities and in some years these associations were much stronger than in other places and periods. Only the association between the two fathers decreased linearly over time. With increasing modernization, the association between the occupational status of the groom's and the bride's father decreased, while the association between the status of the groom and that of the bride's father increased. This suggests that for men, status became an individual achievement, while for women, who had fewer opportunities to express their own capabilities in the form of a career, the father's status remained important as an indicator of their own social status.

6. Research design and data

To check our theoretical conjectures, we will estimate linear regression models with the status of the bride's father as the dependent variable (compare, for example, Lippényi, van Leeuwen, Maas, & Óri, 2017; Seiler, 2018; Zijdeman & Maas, 2010). Note that these models are not causal (the status of the groom does not causally influence the status of his father-in-law), but should be interpreted as selection models: the groom selects a partner with certain characteristics (or more precise, on the marriage market men and women try to find a good match according to their search criteria). Since many brides did not have an occupation at the time of their marriage, the status of their father is a better indicator of their social position. Of course, the bride and her parents also play a role in the partner choice. The correlations between characteristics of the groom and characteristics of the bride are the result of these two-way selection processes. Partner choices with respect to social class and education are often analysed using loglinear models. These are less applicable in our case, because they require a categorization of the dependent and independent variables and there is no obvious way to do so. Loglinear models have the advantage that they take group size and changes therein into account. Their main disadvantage is that they do not allow the estimation of the effects of many independent variables, but this is unproblematic for linear regression models.

To take the effect of municipal contexts into account we use multilevel analysis. The two levels are marriages that take place within contexts. A context is defined as a municipality in a certain year. In a first series of models, we investigate the extent of homogamy and how it changed over the period 1821–1913. In a second set, we analyse whether the trends in homogamy can be explained by the characteristics of the context. These analyses are restricted to a shorter period (1859–1910), and, consequently, to

fewer cases. We use two types of data: couple data from civil registration records and context data on the municipality at the time of marriage.

For data at the couple level, we use digitized marriage certificates, which formed part of the civil registration system, formalized by the French in 1792. As part of the official formalities of the marriage ceremony, each couple had to sign a certificate that was then co-signed by a civil servant and witnesses from both sides (groom and bride). These certificates form a rich, standardized source of information, containing information on age, profession, geographic origin, civil status, and place of residence for grooms, brides, and – if present – their parents (Van de Putte, 2005, pp. 100–101). For the current province of Flemish Brabant, these data are held in the provincial and city archives. Since, historically, the city of Brussels was part of what was then known as the province of Brabant, marriage records for Brussels are included in the dataset. Over the past decades, all the records have been collected with the help of various researchers and volunteers.

We started with all currently digitized marriage records from the department of Flemish Brabant 1792–1921 ($N = 417,678$), but we limited the timespan to the period 1821–1913 ($N = 333,729$). We decided to do so because there are relatively few cases for before 1801, and because important information (on the groom's age for example) is often missing. Furthermore, between 1801 and 1805 the proportion of missing cases for status of the father of the groom and of the father of the bride strongly decreases (from 90% to 45%) and then – between 1806 and 1820 – strongly increases (up to around 70% missing). After 1820 the proportion of missing cases slowly and systematically decreases to around 45% in 1913 (see Figure 5). This cautions us to begin our analyses after 1820. Also, the number of marriages dropped during World War I, probably reflecting postponed weddings during the war. We decided to stop before 1914. The data include both first marriages and later marriages. For reasons of consistency and sociological homogeneity, we selected only first marriages ($N = 270,151$) for the analysis.

There is another issue with the data that needs discussion. For the period 1821–1913 we have data from 243 municipalities, of which only 64 municipalities (26.3%) are continuously covered in the dataset. In many cases there are only small

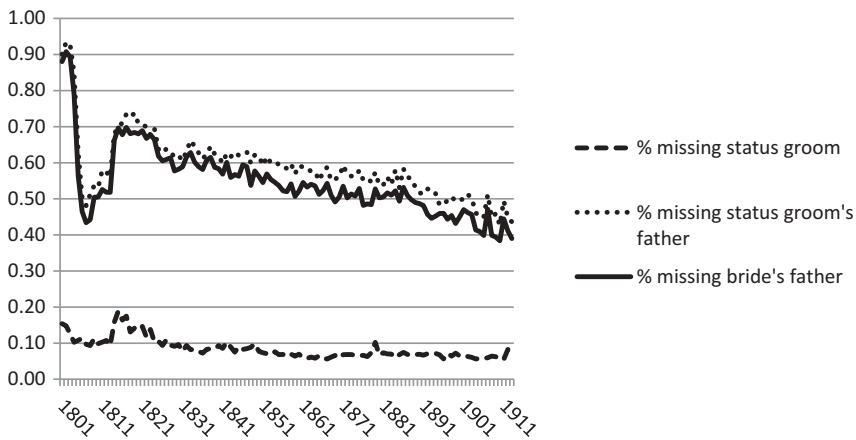


Figure 5. Proportion of marriages with missing information on status of groom, father of groom, and father of bride by marriage year ($N = 417,678$).

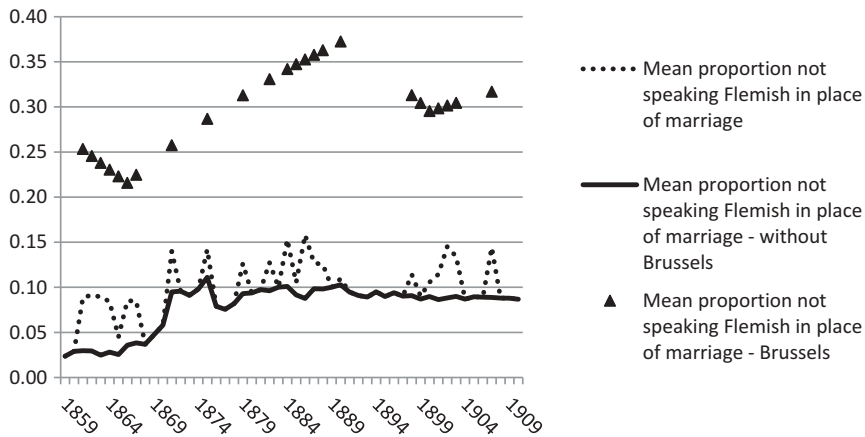


Figure 6. Proportion not speaking Flemish in place of marriage, average for all marriages observed (N = 49,332 – this is the analytical sample with contextual data; see the descriptive table).

gaps that might reflect reality when, in a small village nobody marries in a certain year: 78.6% of all municipalities are in the dataset for more than 80 of the 93 years between 1821 and 1913.⁹ But the fact that Brussels, by far the largest municipality, is not continuously in the dataset has especially strong effects on the descriptive results – see Figure 6. The dotted line is the overall trend. The black triangles are the observations for Brussels. The fluctuations in the dotted line are caused by data becoming available for Brussels and then becoming unavailable. The solid line is the trend for all municipalities except Brussels. Therefore, we will present all trend analyses separately for Brussels and for the other municipalities (compare Figure 4). All models will be run also for all municipalities that are in the dataset for at least 80 out of the 93 years for trend analyses, or those in the dataset for 40 out of 52 years for analyses with contextual variables (in both cases thus excluding Brussels). The first year for which we have community information for important variables in our study is 1859; the last year is 1910. For the analyses using these variables, we therefore study this period only. All contextual information can differ between municipalities, but also between years within a certain municipality. The community characteristics we consider relate to the number of post offices, the presence of a train station, and the population size in the municipality in a given year (see Van Leeuwen & Maas, 2018).¹⁰ The data on post offices come from the Almanach Royal, and the presence of a train station is taken from the Belgium Historical Statistics Project HISSTAT, as is the other information given in the censuses.¹¹

7. Operationalization

Table 1 provides a first impression of the data. Our dependent variable is the *status of the father of the bride*. The marriage records contain information on the occupations of the bride, groom, their parents, and four witnesses. These occupational texts have been coded using HISCO (Van Leeuwen, Maas, & Miles, 2002, 2004) and

Table 1. Descriptives of individual- and contextual-level variables.

	Complete sample		Sample with contextual information		
	M	s.d.	M	s.d.	Range
Status bride's father	49.77	7.41	49.89	7.37	10.60–99.00
Status groom's father	49.97	7.61	50.17	7.50	10.60–99.00
Status groom	47.04	12.74	47.62	11.96	10.60–99.00
Year of marriage	1876.92	25.93	1888.19	15.35	1821–1913
Groom's age	26.65	4.46	26.31	4.29	17–84
Groom literate	0.77		0.84		0/1
Groom's father in agriculture	0.55		0.55		0/1
Groom in agriculture	0.35		0.34		0/1
Language:					
Same for bride and groom			0.67		0/1
Unclear whether the same			0.31		0/1
Different for bride and groom			0.01		0/1
Number of post offices			0.24	0.71	0–17.45
Train station			0.36		0/1
Population size (x1,000)			0.29	1.01	0.01–21.75

Notes: Complete sample (1821–1913): $N_{ind} = 70,999$, $N_{contexts} = 15,083$, $N_{municipalities} = 238$

Sample with contextual information (1859–1910): $N_{ind} = 46,471$, $N_{context} = 9,076$, $N_{municipalities} = 226$

converted into HISCAM (Lambert, Zijdeman, Leeuwen, Van, Maas, & Prandy, 2013). This scale is built on the assumption that the main general determinant of patterns of social interaction between people with certain occupations is the hierarchical position of these occupations in society (factory workers are not likely to interact with lawyers). In the case of HISCAM, information on intergenerational mobility from 1.5 million marriage records from six different countries (Britain, Canada, France, Germany, the Netherlands, and Sweden) covering the period 1800–1938 was used to estimate the social distances between occupations. If intergenerational mobility between two occupations was relatively common, the estimated distance between these occupations on the HISCAM scale will be small. If mobility is rare, the estimated distance will be large. The main – hierarchical – dimension behind the estimated distances between all pairs of occupations was transformed into a scale ranging from 1 to 99, where a higher value indicates a higher occupational status. A difference of 10 points corresponds, for instance, to the estimated social distance between an engineer and a technician; or between A primary education teacher and retail trade salesperson.

As described in the data section, information on the status of the parents is relatively often missing. The main reason for this is that this parent was no longer alive by the time their children married (54% of the missing cases). There are also municipalities in which occupations were never recorded.¹² Grooms whose father-in-law has a valid score on occupational status have a somewhat lower status score themselves than grooms whose father-in-law does not have a valid score. However, the difference is less than one status point (47.2 versus 48.0). It is in the same direction for all decades, varying from a 0.45-point lower status for grooms without missing data on father-in-law's status between 1821–30 to 1.82 points between 1901 and 1910. As could be expected, grooms without missing data on the father-in-law's status are somewhat younger than grooms with missing data, but here again the difference is small. The first group is on average 27.7 years old at marriage, the second group 29.1 years old. We do not expect our

homogamy analyses to be affected by this weak selectivity with respect to status and age.

Status of the groom and status of the father of the groom: These are constructed in the same way as status of the bride's father. Status of the groom is missing in about 7.6% of all cases, status of his father in 52.9% of all cases. The selectivity in the status of the groom's father is small and very similar to that in the status of the bride's father.

Groom is literate: The only information on the level of education of the groom is whether he was able to sign the marriage certificate. The percentage of grooms who were not, decreased sharply over time: from 57% in 1821 to 11% in 1913.

At the level of the marriage, we control for whether the *groom or his father worked in the agricultural sector*. These variables will show whether trends in homogamy are caused by a decline in the size of the agricultural sector. Occupations in HISCO major group 6 (farmers, farm workers, fishermen) are considered the agricultural sector. Overall, 53% of all fathers and 31% of grooms worked in the agricultural sector. This sector did not decrease much in size until 1900, after which the percentages dropped to 40% and 20%, respectively. We also control for *year of marriage* and *age of the groom*. These control variables have very few missing values. After listwise deletion of all cases with missing values, 70,999 marriages remain in 238 municipalities and 15,083 contexts

Number of post offices in a municipality in a certain year: Data are available for all Belgian municipalities for the years 1859, 1869, 1879, 1889, 1899, 1910, 1919, 1929, and 1938. Information for the year's in-between has been estimated by linear interpolation.

Presence of a train station in a municipality in a certain year: Using data on the year in which each train station opened, a dummy variable was created indicating for each year whether there was a train station in a municipality.

Population size: We calculated this variable from the census data as the sum of all people speaking Flemish and all people not speaking Flemish.

Finally, we use the contextual information to construct a variable that indicates whether the groom and the bride grew up in a municipality in which the *same language* was spoken. The place of residence of the father of the groom and the father of the bride are used to define where the groom and the bride grew up. Using census data, all Belgian municipalities are classified into three categories: (1) those with a population in which fewer than 10% did not speak Flemish, (2) those with a population in which 10%–90% did not speak Flemish, and (3) those with a population in which more than 90% did not speak Flemish. If both the bride and the groom were from a Flemish-speaking municipality (category 1) or both were from a non-Flemish-speaking municipality (category 3), they were almost certainly raised speaking the same language. If one of them came from a Flemish-speaking municipality and the other from a non-Flemish speaking municipality, they are considered to have been raised speaking a different language. All other combinations, which involve either the bride or the groom coming from a mixed-language community, are classified as 'uncertain'. As shown in [Table 1](#), 67% of brides and grooms shared the same language. In 1% of the cases, we know almost certainly that they grew up with a different language. This is a small share indicating strong language homogamy. However, due to the large sample size, there were still 607 mixed couples, allowing a

test of our hypothesis. This subset of the data is used for analyzing the effects of context characteristics on homogamy. It includes 46,471 marriages from 226 municipalities and 9,076 contexts.

8. Results

We will now present social homogamy models, first for the whole period, and later for the latter part of the period for which we have community data. The first homogamy models can be seen in Table 2.¹³ Model 1 evinces a strong homogamy for social origin: the ‘effect’ of the status of the groom’s father on the status of the bride’s father is 0.35. That means that, on average, grooms whose father had a 10-point higher status married a bride whose father had a 3.5-point higher status. The groom’s own status also plays a role in the partner selection process, but to a much smaller extent – see Model 2. A difference in status of 10 points between grooms leads to a difference in status for their fathers-in-law of almost 1 point. The groom’s own status explains 17% of the homogamy by social origin. Model 3 shows that if the status of the groom’s father is excluded from the model, the effect of the groom’s own status would be overestimated by 67%. Being literate is also a resource on the marriage market, as Model 4 demonstrates. Literate men marry women whose fathers have on average a 1-point higher status – a rather small effect. Finally, we include the dummy variables for whether the father of the groom and the groom worked in the agricultural sector. Both variables have a significant, but small effect. Grooms whose father worked in agriculture married on average 0.46-status-points higher, but if they themselves worked in agriculture they married about one-fifth of one status point lower. Most importantly, including these control variables does not affect status homogamy. The effects of the father of the groom’s status, groom’s status, and the groom’s literacy remain the same.

The variances in the effects (‘slopes’) of the status of the father of the groom, the status of the groom, and the groom’s literacy are all significant. This indicates that these effects differ between contexts. For social homogamy it does matter in which

Table 2. Results of multilevel linear regression models: regressing status of bride’s father on characteristics of the groom (1821–1913).

	Model 1		Model 2		Model 3		Model 4		Model 5	
	B	p	B	p	B	p	B	p	B	p
Intercept	49.62	0.00	49.62	0.00	49.41	0.00	48.77	0.00	48.58	0.00
Status groom’s father	0.35	0.00	0.29	0.00			0.28	0.00	0.28	0.00
Status groom			0.09	0.00	0.15	0.00	0.08	0.00	0.08	0.00
Groom literate							1.09	0.00	1.08	0.00
Groom’s age	0.05	0.00	0.05	0.00	0.07	0.00	0.05	0.00	0.05	0.00
Year of marriage/10	0.08	0.00	0.04	0.00	0.08	0.00	–0.02	0.03	–0.03	0.02
Groom’s father in agriculture									0.46	0.00
Groom in agriculture									–0.19	0.00
Individual-level variance	43.50	0.00	41.76	0.00	46.02	0.00	41.54	0.00	41.50	0.00
Context-level variance	0.62	0.00	0.33	0.00	0.69	0.00	0.07	0.33	0.09	0.20
Variance slope status groom’s father	0.07	0.00	0.06	0.00			0.06	0.00	0.06	0.00
Variance slope status groom			0.01	0.00	0.02	0.00	0.01	0.00	0.01	0.00
Variance slope groom literate							0.37	0.00	0.39	0.00

Note: All continuous independent variables are centred around the mean. $N_{ind} = 70,999$, $N_{context} = 15,083$

community you were born, and when. The contextual variance in the intercept decreases most over the models, indicating that much of the difference between contexts in average status of the bride's father is due to differences in the composition of the population. The conclusions are the same if we look only at municipalities for which we have data covering at least 80 years.

In order to describe changes over time, we replace the continuous time variable with dummy variables for decades in which the marriage took place, starting from 1821 to 1830 and ending with 1911 to 1913. We also add the interaction effects of these dummies with status of groom's father, status of the groom, and groom's literacy. The complete model can be found in the [appendix](#) (Model 1). The effect of the status of the groom's father generally declines over time, while that of the status of the groom increases, in line with modernization theory – see panel A of [Figure 7](#). The reduction in the gap between the two effects is impressive. At the start of our period, ascription – in the form of the effect of the status of the family into which one was born, as measured by the father's occupation – is seven times as strong as the effect of the status the groom has achieved himself, as measured by his own occupation. From about 1861–70 this gap narrowed, before all but disappearing by the start of World War I.

Panel B shows that the effect of being literate – in the rather crude way we can measure this – as opposed to not being literate declines over time. This most probably does not mean that the effect of education decreased over time, and we do have to keep in mind that illiteracy strongly declined over the period. At the end of the period, almost everyone could at least place a signature, however shaky, on a marriage certificate, and those who could not did not see their marriage prospects much impaired.

The conclusions remain the same even if we look only at municipalities for which we have data covering at least 80 years (Model 2 in the [Appendix](#)). Thus while the gaps in the data, especially with regard to Brussels, do have a bearing on our descriptive results, as we showed before, they have hardly any effect on these analytical results – only the originally positive effect of being literate narrows and the trend in this effect flattens. This indicates that in the early nineteenth century being literate was probably more important in the capital Brussels than in other parts of the province. As the appendix also shows, the changes in homogamy with respect to ascribed and achieved status are not caused by a decline in the farming sector. In Model 3 (see [appendix](#)), we control for

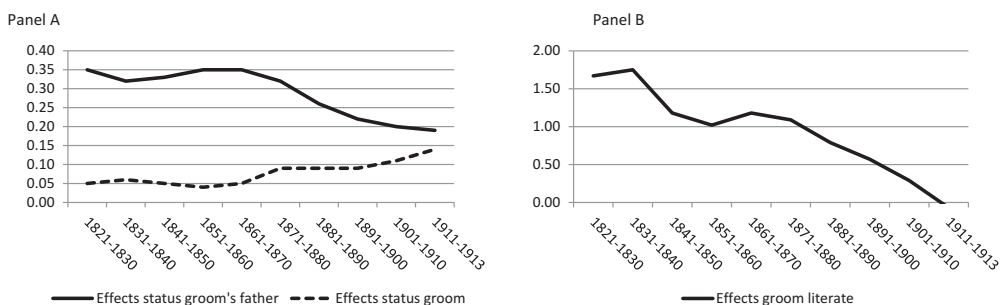


Figure 7. Effects of groom's status and status of groom's father (panel A) and of groom's literacy (panel B) by decade (N = 70,999).

Note: Dependent variable is status of bride's father. See [appendix](#) for complete model.

changes in the effects of working in the agricultural sector. The homogamy trends in this model are virtually identical to those observed without these controls. Interestingly, the effect of having a father in agriculture shows a trend similar to having a high-status father: it helped the son less over time. On the other hand, a groom who worked in agriculture was less harmed by this over time. At the beginning of the twentieth-century grooms working in agriculture were even able to marry brides with a somewhat higher status than grooms working outside agriculture. Finally (model 4 in the [appendix](#)), we added fixed effects for the municipalities of marriage in order to take unmeasured differences between these municipalities into account. To be able to estimate these models, we have to take a random sample of 50% of all cases and exclude very small municipalities (with fewer than 100 marriages in the whole period). As a result, the standard errors are larger. The effects, however, are only slightly smaller than those in the main analysis, indicating that only a small part of the observed trend is due to unobserved heterogeneity between municipalities.

Thus far we have not looked at language homogamy and community characteristics. We will now include them, even if this means limiting our analyses in time. In [Table 3](#), changes in homogamy are related to whether the bride and bridegroom are raised speaking the same language, and to variations in characteristics of communities over time and space. Model 1 confirms that the effect of the status of origin at the beginning of the period dwarfs that of grooms' status, and that being literate has a small positive effect, albeit one that diminished over time. Model 1 serves as a baseline model.

Model 2 includes a dummy variable for couples raised speaking a different language and a dummy variable for couples for whom this is unclear because at least one of them was raised in a municipality with a considerable language minority. Furthermore, the model includes interactions of these dummy variables with status of groom's father, status of the groom, and literacy of the groom. The only significant interaction is with status of the groom. If either the bride or the groom (or both) were raised in a municipality with a language minority, the effect of status of the groom on status of bride's father is stronger. This is in the predicted direction. We find the same result when we re-estimate the model including only municipalities that are observed for at least 40 years (thus excluding Brussels among others)¹⁴ and in a model that includes fixed effects for municipalities of marriage.¹⁵ These two extra models also show that the effect of groom's status is stronger for couples raised with a different language (1859–70: 0.10) than for couples raised with the same language (0.05). In the model that includes only municipalities that are observed for at least 40 years, the interaction between status of groom's father and being raised in a municipality with a language minority becomes significant as well. The effect is negative and thus not in line with our hypothesis. In a model that includes fixed effects for municipalities of marriage, this interaction is not significant. All in all, there seems to be support for one part of hypothesis 3 on the relationship between language homogamy and the effect of groom's status, but not for the part on the relationship between language homogamy and the effect of status of groom's father.

In Model 3 we add the contextual variables. Trends in the effects of father's and groom's status are hardly explained by the contextual characteristics. The decrease in

Table 3. Results of multilevel linear regression models: regression status of bride’s father on characteristics of groom, effects of modernization and language homogamy (1859–1910).

	Model 1		Model 2		Model 3	
	B	p	B	p	B	p
Intercept	48.74	0.00	48.64	0.00	48.59	0.00
Status groom’s father (1859–70)	0.36	0.00	0.36	0.00	0.38	0.00
* 1871–80	–0.03	0.27	–0.02	0.39	–0.02	0.48
* 1881–90	–0.10	0.00	–0.09	0.00	–0.09	0.00
* 1891–00	–0.13	0.00	–0.13	0.00	–0.12	0.00
* 1901–10	–0.15	0.00	–0.15	0.00	–0.14	0.00
* same language (ref.)						
* unclear whether same language			–0.03	0.03	–0.02	0.13
* different language			–0.05	0.15	–0.04	0.23
* number of post offices					0.00	0.78
* presence of train station					–0.04	0.01
* population size (x10,000)					0.00	0.97
Status groom (1859–70)	0.06	0.00	0.05	0.00	0.04	0.00
* 1871–80	0.04	0.00	0.02	0.04	0.02	0.05
* 1881–90	0.04	0.00	0.02	0.07	0.02	0.14
* 1891–00	0.04	0.00	0.02	0.02	0.03	0.02
* 1901–10	0.06	0.00	0.05	0.00	0.05	0.00
* same language (ref.)						
* unclear whether same language			0.07	0.00	0.06	0.00
* different language			0.03	0.11	0.03	0.18
* number of post offices					–0.00	0.76
* presence of train station					0.03	0.00
* population size (x10,000)					0.00	0.12
Groom literate (1859–70)	1.14	0.00	1.11	0.00	1.23	0.00
* 1871–80	–0.09	0.73	–0.10	0.71	0.10	0.70
* 1881–90	–0.29	0.29	–0.31	0.27	–0.14	0.63
* 1891–00	–0.50	0.08	–0.51	0.08	–0.14	0.65
* 1901–10	–0.65	0.03	–0.65	0.03	–0.35	0.23
* same language (ref.)						
* unclear whether same language			0.11	0.57	–0.05	0.84
* different language			0.91	0.29	0.73	0.40
* number of post offices					–0.16	0.03
* presence of station					–0.37	0.06
* population size (x10,000)					0.17	0.00
Groom’s father in agriculture (1859–70)	0.50	0.01	0.53	0.01	0.57	0.00
* 1871–80	–0.37	0.18	–0.34	0.22	–0.35	0.21
* 1881–90	–0.12	0.65	–0.09	0.74	–0.01	0.97
* 1891–00	0.03	0.89	–0.05	0.83	0.05	0.85
* 1901–10	–0.48	0.05	–0.46	0.06	–0.45	0.06
Groom in agriculture (1859–70)	–0.49	0.02	–0.42	0.04	–0.32	0.12
* 1871–80	0.32	0.27	0.37	0.19	0.33	0.25
* 1881–90	0.44	0.11	0.52	0.06	0.54	0.05
* 1891–00	0.47	0.08	0.52	0.05	0.44	0.10
* 1901–10	0.94	0.00	0.91	0.00	0.86	0.00
Groom’s age	0.05	0.00	0.05	0.00	0.05	0.00
Year of marriage (ref. = 1859–70):						
1871–80	–0.01	0.97	–0.09	0.71	–0.18	0.49
1881–90	0.04	0.90	–0.07	0.80	–0.28	0.34
1891–00	0.04	0.90	–0.04	0.89	–0.25	0.41
1901–10	0.31	0.30	0.32	0.28	0.12	0.69
Same language (ref.)						
Unclear whether same language			0.16	0.40	0.16	0.44
Different language			0.20	0.81	0.25	0.76
Number of post offices					0.20	0.00
Presence of station					0.26	0.14
Population size (x10,000)					–0.08	0.03
Individual-level variance	41.58	0.00	41.56	0.00	41.27	0.00
Context-level variance	0.11	0.32	0.11	0.36	0.07	0.24
Variance slope status groom’s father	0.06	0.00	0.06	0.00	0.06	0.00

(Continued)

Table 3. (Continued).

	Model 1		Model 2		Model 3	
	B	p	B	p	B	p
Variance slope status groom	0.01	0.00	0.01	0.00	0.01	0.00
Variance groom literate	0.33	0.01	0.29	0.03	0.00	

All continuous independent variables are centred around the mean. $N_{\text{ind}} = 46,471$, $N_{\text{context}} = 9,076$.
The variance of the slope of 'groom literate' is redundant in model 3; test statistics cannot be computed by the model.

the effect of groom's literacy, however, is explained by the contextual characteristics (the dummies for periods*groom literate are no longer significant).

The effect of status of groom's father is smaller in municipalities with a train station (1859–70: 0.38 without, and 0.34 with a train station). This is what modernization theory predicts. However, the effect of status of groom's father is not related to the other modernization indicators. Whereas the effect of status of groom's father is smaller in municipalities with a train station, the effect of status of the groom himself is larger in such municipalities (1859–70: 0.04 without, and 0.07 with a station).

As noted earlier, the effect of literacy of the groom decreased over time. Model 3 makes clear that this seems to be driven by modernization. The effect is smaller in municipalities with many post offices and with a train station. However, literate grooms are better able to attract or select brides with higher-status fathers in larger municipalities.

The results of the model with fixed effects for municipalities of marriage are very similar. However, when the model is re-estimated with only municipalities that are in our dataset for at least 40 years, the trends remain the same, though the effects of the modernization indicators become smaller and not significant. This indicates that these effects are driven partly by the large differences in developments between Brussels and the other, more agricultural municipalities (see also the contextual descriptions).

9. Conclusion and discussion

We set out to answer two questions: First, how large were the temporal and municipal variations in homogamy by social status in the Belgian province of Flemish Brabant (and Brussels)? Second, how can we explain any such variations, and in particular can these be explained by modernization) and the existence of linguistic divisions? To investigate these questions, we used two types of data: couple data from civil registration records in Flemish Brabant 1821–1913 ($N = 333,729$), and, for some analyses, context data on the municipality at the time of marriage to a shorter period, 1859–1910, and thus a lower number of marriages ($N = 270,151$).

From modernization theory we deduced the hypothesis that during modernization a shift took place from homogamy on ascribed characteristics (such as father's' status) to homogamy on achieved characteristics (such as groom's status). Our data corroborate this shift over time. Also from modernization theory, we derived the hypothesis that in municipalities with mass transport and mass communication, both homogamy by father's status and homogamy by groom's status are smaller than in municipalities without mass transport and mass communication. This hypothesis was not supported. Mass transport did indeed weaken homogamy by social origin. However, groom's own

status was more important in municipalities with access to mass transport. Together these findings are more in line with a shift from ascription to achievement than with a general disappearance of homogamy. The presence of a post office was not related to the strength of both types of status homogamy. From the theory of crosscutting circles, we derived the hypothesis that if bride and groom were raised in a different language, both homogamy by father's status and homogamy by groom's status are stronger than if they were raised in the same language. We found partial support for this hypothesis in the form of a positive association between language homogamy and the effect of groom's status (but not the effect of the status of the groom's father). ?

Before proceeding to interpret these results, we acknowledge data issue and how these might be improved upon in future research. For the marriage records, we noted that, especially for Brussels, the data-collection process has not yet been completed. In future, there will be more complete data, also for other parts of Flanders. With respect to community characteristics, we were unable to measure either educational expansion or industrialization, key elements in theoretical thinking about the historical trajectories of social homogamy. Due to a lack of sources, this seems an issue that may not be easily repaired in the future. Two other important variables are also not fully captured: migration and group size. Migration could not be fully incorporated as there are no coded birth places in the data. Group size is not easily defined for the continuous variable status. There are fewer people with high status than with low status, but when defined in this way, group size would strongly correlate with status itself.

We have been able to capture the effect of linguistically crosscutting circles through the municipality of residence of the parents as a proxy for the place bride and groom were raised. We could make a distinction between couples who each came from a municipality in which 90% or more spoke the same language, couples of which at least one of them came from a municipality in which a different language was spoken by at least 10% of the population, and couples who each came from a municipality in which 90% or more spoke a different language. While we believe that the place of residence of the parents is a good proxy for the place a person was raised, we hope that future research finds a way to better measure at the individual level who spoke Flemish and who spoke French as a first language, for example by looking at the names of the persons. We do not know if we would have found more (or less) support for the effect of language barriers if we could have captured these better.

Irrespective of the data issues, it is interesting that we found the strongest positive effect on status homogamy of the groom when the bride or the groom was raised in a municipality with a sizable language minority. This indicates that language borders were not weaker in such places, which one might expect if people meet more often. To the contrary, people seem more hesitant to cross the language border. They only do so if the costs – in the form of not being able to marry someone from similar status – are high. Encounters with people speaking a different language seem to make people aware of differences instead of weakening language borders.

When we tested the effects of certain modernization characteristics on the level of communities, we found that mass transport did indeed weaken homogamy by social origin, but groom's own status was more important in municipalities with access to mass

transport. We do not, of course, know if we would have found that other modernization processes would have had an effect, had we been able to measure these, such as industrialization and educational expansion. We have to leave it to further research to disentangle this Gordian knot better, while taking into account rival explanations such as that of another interesting phenomenon at the time: fertility decline and the associated quantity-quality trade off.¹⁶ We did, however, find, that during modernization a shift took place from homogamy on fathers' status to homogamy on groom's status, which is in line with the results from other European countries in the same period (Maas & van Leeuwen, 2016; Van Leeuwen et al. 2016).

Notes

1. For example, Drachsler (1921), Bogardus (1925), Gordon (1964), Alba and Golden (1986), Pagnini and Morgan (1990); and as a force constituting social cohesion in society as a whole – for example, Merton (1941), Lévi Strauss (1969), Blau and Schwartz (1984), Putnam and Campbell (2012), Schwartz (2013), see also the article by Lippenyi et al in this special volume.
2. *Trouw*, 3 June 2014, 'Vlaams-Waalse liefde is schaars goed in België'. See also Fonteyn (2014).
3. Marriages between Belgians and non-European immigrants were 15 times as prevalent as those between French- and Flemish-speaking Belgian natives. See Statbel at http://statbel.fgov.be/nl/modules/publications/statistiques/bevolking/downloads/bevolking_-_huwelijken_in_2014_dossier.jsp. The comparison, though, does not account for the fact that some of the marriages with non-European immigrants might be with Belgian-born residents of immigrant descent.
4. In Becker (1973, 1974)-type models there will not always be positive assortative mating as implied in the text. A leading idea in these models is that one of the main gains to marriage comes through specialization (usually husband on labour market and wife in the home). In that case, it is not as simple as stated here that husband and wife would always want to marry homogamously or upwards. For women, it might well have been the case that to marry someone from the same or higher class was important from an economic perspective (to secure economic living standards), but for men this would depend on the economic sector and on inheritance practices. (We thank an anonymous referee for this comment.)
5. And also educational expansion, which we cannot capture well with the census data that we use, and thus do not incorporate in the analyses.
6. This is so in all cases, except the one case where the dimensions overlap to such an extent that anyone who is, for example, a member of a certain social class is also French speaking, and those who belong to other classes are Flemish speaking (Blau & Schwartz, 1984, p. 99, 196, *et passim*).
7. It may be good to note that migration may have been selective, in the sense that people might have moved in order to find an appropriate marriage partner. In that sense the structure (language or social) of the municipality of residence will not have been exogenous to the marriage decision. We did however operationalize language not via the municipality of residence but that of upbringing.
8. Annual rents for a single hectare of land already amounted to the equivalent of 30 days' labour around 1800, and by 1850 had risen to more than 60 days' labour: Boone, Gaus, Scholliers, and Vandenbroecke (1982, p. 33).
9. The nine largest municipalities (mean number of marriages > 50 per year) are as follows;

Name (department)	Mean number of marriages per year	First and last year	Number of years with observations in the data
Elsene (Brussels)	108	1823–1875	16
Anderlecht (Brussels)	104	1821–1885	18
Sint-Jans-Molenbeek (Brussels)	51	1821–1871	36
Brussels (Brussels)	802	1821–1912	52
Laken (Brussels)	56	1821–1891	71
Vilvoorde (Flemish Brabant)	50	1821–1910	90
Leuven (Flemish Brabant)	210	1821–1912	92
Tienen (Flemish Brabant)	74	1821–1913	92
Halle (Flemish Brabant)	55	1821–1913	93.

10. We would have liked to include data on steam engines as an indicator of industrialization, but only the censuses of 1838, 1896, and 1937 contain such information. These are not only few and far apart, but also very different in the way they measure the use of steam energy. The *Industrial Counts* are not very useful either for our purposes: 1846 (apart from large cities not at the municipal level), 1880 (only factories).
11. Very kindly supplied to us by its curators – see note 1, http://www.hisstat.be/hisstat_start.php.
12. These are Aarschot, Boortmeerbeek, Herent, Lovenjoel, Neerlinter, Roosbeek, Schaffen, Tremeloo, Sint-Joris, and Wilsele. In these 10 communities the civil registers did not survive the horrors of World War I. They were reconstructed after the war on the basis of the parish registers. Since the overwhelming majority of the population were in those registers, that would not per se create problems for us, were it not for the fact that the parish registers contain no information on occupations of either grooms or fathers/fathers-in-law.
13. Not displayed is the ‘empty’ model. The variance components in the empty mode are: individual-level variance: 52.24; context-level variance: 1.76; intraclass correlation: 3.3%.
14. Results available on request.
15. Results available on request. This model could be estimated with 100% of the cases, but we again excluded municipalities with less than 100 marriages over the whole period.
16. See e.g. Van Bavel (2006), Van Bavel, Moreels, Van de Putte, and Matthijs (2011).

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Appendix

Results of multilevel linear regression models: regression of status of bride's father on characteristics of groom and time trends in effect of father's status, groom's status, and groom's literacy (Model 1), for municipalities for which we have data for at least 80 years (Model 2), with time trends in effects of father and groom working in agriculture (Model 3), and with fixed effects for municipalities (Model 4) (1821–1913)

	Model 1		Model 2		Model 3		Model 4	
	B	p	B	p	B	p	B	p
Intercept	48.49	0.00	48.73	0.00	48.17	0.00	47.78	0.00
Status groom's father (1821–30)	0.35	0.00	0.38	0.00	0.34	0.00	0.35	0.00
* 1831–40	–0.03	0.30	–0.04	0.28	–0.03	0.39	–0.04	0.32
* 1841–50	–0.02	0.43	–0.04	0.28	–0.02	0.43	–0.04	0.43
* 1851–60	–0.00	0.96	–0.01	0.71	–0.00	0.99	–0.01	0.83
* 1861–70	0.00	0.90	–0.01	0.86	0.01	0.71	–0.03	0.46
* 1871–80	–0.03	0.34	–0.05	0.14	–0.02	0.54	–0.04	0.37
* 1881–90	–0.09	0.00	–0.11	0.00	–0.08	0.00	–0.09	0.03
* 1891–00	–0.13	0.00	–0.16	0.00	–0.13	0.00	–0.13	0.00
* 1901–10	–0.15	0.00	–0.17	0.00	–0.14	0.00	–0.15	0.00
* 1911–13	–0.16	0.00	–0.17	0.00	–0.15	0.00	–0.13	0.01
Status groom (1821–30)	0.05	0.00	0.05	0.00	0.07	0.00	0.07	0.00
* 1831–40	0.01	0.52	0.01	0.63	0.01	0.69	–0.01	0.54
* 1841–50	0.00	0.94	0.00	0.78	–0.00	0.79	–0.02	0.24
* 1851–60	–0.01	0.61	–0.00	0.98	–0.02	0.24	–0.03	0.16
* 1861–70	–0.00	0.85	0.00	0.91	–0.01	0.46	–0.01	0.53
* 1871–80	0.04	0.00	0.04	0.01	0.03	0.05	0.01	0.45
* 1881–90	0.04	0.00	0.04	0.00	0.03	0.05	0.02	0.37
* 1891–00	0.04	0.00	0.04	0.00	0.03	0.02	0.01	0.48
* 1901–10	0.06	0.00	0.07	0.00	0.05	0.00	0.03	0.11
* 1911–13	0.09	0.00	0.08	0.00	0.07	0.00	0.06	0.04
Groom literate (1821–30)	1.67	0.00	1.29	0.00	1.63	0.00	1.64	0.00
* 1831–40	0.08	0.80	0.05	0.87	0.10	0.74	–0.11	0.80
* 1841–50	–0.49	0.11	–0.40	0.20	–0.49	0.11	–0.73	0.10
* 1851–60	–0.65	0.03	–0.41	0.17	–0.64	0.04	–0.67	0.13
* 1861–70	–0.49	0.09	–0.23	0.42	–0.44	0.13	–0.24	0.56
* 1871–80	–0.58	0.05	–0.28	0.36	–0.54	0.07	–0.27	0.53
* 1881–90	–0.88	0.01	–0.68	0.03	–0.86	0.01	–0.92	0.04
* 1891–00	–1.10	0.00	–0.43	0.19	–1.07	0.00	–0.89	0.06
* 1901–10	–1.38	0.00	–0.87	0.01	–1.35	0.00	–0.51	0.30
* 1911–13	–1.74	0.01	–1.02	0.12	–1.67	0.01	–0.84	0.37
Groom's father in agriculture (1821–30)					1.25	0.00	1.04	0.02
* 1831–40					–0.54	0.16	–0.49	0.39
* 1841–50					–0.13	0.74	0.35	0.54
* 1851–60					–0.40	0.30	–0.02	0.97
* 1861–70					–0.77	0.03	–0.56	0.29
* 1871–80					–1.04	0.00	–1.19	0.02
* 1881–90					–0.87	0.01	–0.50	0.33
* 1891–00					–0.70	0.04	–0.56	0.27
* 1901–10					–1.23	0.00	–1.28	0.01
* 1911–13					–1.46	0.00	–1.48	0.02
Groom in agriculture (1821–30)					–0.87	0.01	–0.57	0.21
* 1831–40					–0.06	0.88	0.42	0.47
* 1841–50					0.30	0.45	0.17	0.78
* 1851–60					0.66	0.09	0.35	0.54
* 1861–70					0.28	0.46	0.19	0.73
* 1871–80					0.58	0.11	0.46	0.39
* 1881–90					0.79	0.03	0.63	0.23
* 1891–00					0.82	0.02	0.40	0.44
* 1901–10					1.29	0.00	1.29	0.01

(Continued)

(Continued).

	Model 1		Model 2		Model 3		Model 4	
	B	p	B	p	B	p	B	p
* 1911–13					1.60	0.00	1.04	0.12
Groom's age	0.05	0.00	0.05	0.00	0.04	0.00	0.05	0.00
Year of marriage (ref. = 1821–30):								
1831–40	0.22	0.32	–0.08	0.74	0.52	0.06	0.20	0.60
1841–50	0.24	0.30	0.12	0.62	0.16	0.57	–0.01	0.99
1851–60	0.38	0.09	0.25	0.28	0.28	0.32	0.17	0.68
1861–70	0.37	0.08	0.05	0.83	0.65	0.01	0.22	0.56
1871–80	0.25	0.28	–0.09	0.70	0.56	0.04	0.45	0.26
1881–90	0.55	0.03	0.37	0.16	0.68	0.02	0.50	0.25
1891–00	0.67	0.01	0.11	0.70	0.68	0.03	0.72	0.11
1901–10	0.92	0.00	0.53	0.06	1.10	0.00	0.38	0.42
1911–13	1.21	0.05	0.58	0.35	1.39	0.03	0.84	0.36
Individual-level variance	41.50	0.00	33.94	0.00	41.45	0.00	40.92	0.00
Context-level variance	0.04	0.58	0.05	0.70	0.05	0.50	0.00	
Variance slope status groom's father	0.06	0.00	0.08	0.00	0.06	0.00	0.06	0.00
Variance slope status groom	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00
Variance slope groom literate	0.39	0.00	0.19	0.20	0.39	0.00	0.00	

Notes All continuous independent variables are centred around the mean.

Models 1 and 2: $N_{\text{ind}} = 70,999$, $N_{\text{context}} = 15,083$, Model 3: $N_{\text{ind}} = 58,129$, $N_{\text{context}} = 13,704$, Model 4: $N_{\text{ind}} = \text{random sample of 50\%}$, 64 municipalities with less than 100 marriages excluded.

Model 4: The contextual variance and the variance of the slope of 'groom literate' are redundant; test statistics cannot be computed by the model.