Social status homogamy in a religiously diverse society. Modernization, religious diversity, and status homogamy in Hungary between 1870–1950

Zoltán Lippényi, Marco H. D. van Leeuwen, Ineke Maas & Péter Őri

Published online: 22 May 2017.

Submit your article to this journal ↗

View related articles ↗

View Crossmark data ↗

Routledge
Taylor & Francis Group

Social status homogamy in a religiously diverse society. Modernization, religious diversity, and status homogamy in Hungary between 1870–1950

Zoltán Lippényi[a], Marco H. D. van Leeuwen[a], Ineke Maas[a] and Péter Őri[b]

[a]Department of Sociology, Utrecht University/ICS, Utrecht, The Netherlands; [b]Hungarian Academy of Sciences, Institute of Demography, Budapest, Hungary

ABSTRACT

This study investigates the historical patterns and determinants of marrying someone from the same social status background in Hungary from the second half of the nineteenth century to the first half of the twentieth century. We focus on the classic question of how modernization influences homogamy, but we also address a problem studied less frequently: How does religious diversity in society relate to status homogamy? Utilizing data from a large sample of church marriage registers for present-day Hungary, we find a steady decline in the association between a bridegroom's parental social status and his bride's social background, and an initial increase and subsequent decline in the association between a bridegroom's own status and a bride's status of origin. More industrial social contexts are characterized by less parental status homogamy; however, greater educational opportunity is associated with more homogamy by bridegroom's own status. We find a decline in same-status preferences over time and in more industrialized contexts in early modernizing Hungary, but also a short period of increasing meritocracy in marriage partner selection, which is likely to have been related to educational expansion. We find, too, lower social status homogamy in smaller religious groups, suggesting the importance of locally and historically variable opportunity structures in marital choices.

Introduction

A growing literature aims to reveal the driving forces behind variation in status homogamy across societies. The most frequently investigated hypothesis is that more modern societies produce lower status homogamy (Schwartz, 2013). However, modern societies are often also characterized by greater diversity in culture and religion. Sharing a similar worldview and expressing and reinforcing one's religious group membership make religion highly influential for marital choice. However, the literature on how modernization influences marital homogamy seldom considers this role of diversity. In this article we do, by investigating how modernization and religious diversity in Hungary explain variation in status homogamy.

We study the present-day territory of Hungary in the second half of the nineteenth century and the first half of the twentieth century as it makes for a good case study of how modernization and religious diversity relate to homogamy. Modernization is the technological and societal progress of societies. The most significant modernization processes in nineteenth- and early twentieth-century societies were urbanization, industrialization and the spread of education. Hungary experienced the first significant period of modernization during these years, which makes it possible for us to study the development of marital homogamy in a newly industrializing society. This is fairly unique as few other historical micro-data sets go back to such an early period of modernization (van Leeuwen & Maas, 2010). An additional important contribution is that almost all historical studies on homogamy deal with Western European countries. Hungary, as well as other Central Eastern European countries, differs in that the feudalistic economic structure was dominated by farming on large estates, and dependent subsistence farming continued well beyond the abolition of serfdom in 1848. Studying how industrial development changes status processes under societal conditions different to those in Western Europe puts the theory of modernization to a stringent test. Finally, present-day Hungary was religiously divided but homogenous in terms of ethnicity and language, so we can isolate status and religion from other social divisions.

Hungary showed considerable variation in the extent of modernization during the nineteenth and early twentieth centuries, and the relative size of its religious groups differed much across communities (Faragó, 2011; Katus, 2010; Tomka, 2013). The largest denomination in present-day Hungary in this period were the Roman Catholics (64–65% of the population), but there were also sizeable religious minorities: Hungarian Reformed (21%), Lutheran (6%) and Jewish (5–6%).[1] Religious denominations in Hungary differed in their cultural and social status characteristics, but they were by no means completely closed and separate from each other. When religious and status groups partially overlap, religious divisions and varying opportunities to marry within one's religious group in the local community might have consequences for the importance of status when choosing a marriage partner. This is because marriage partners that satisfy both status and religious similarity can be scarce in communities inhabited by different religious groups. There is scant historical literature, however, on how the opportunity to marry within one's religious group influences the extent of social status homogamy in religiously divided societies. Bras and Kok (2005) form an exception, studying the Dutch province of Zeeland from 1796 to 1922, which was populated by both Catholics and Protestants. They showed that in municipalities with a religious minority a greater share of brides and bridegrooms married outside their own class. To our knowledge, our study is only the second to address how the size of religious groups influences status homogamy. In contrast to Bras and Kok (2005), we will be able to distinguish *individuals* who are members of the religious minority from those who are members of the majority, allowing further insight into the mechanism connecting religious diversity and status homogamy.

Our article also aims to study how social status homogamy changed in Hungary during the latter half of the nineteenth and early twentieth centuries. Temporal changes in status homogamy in this period have not been researched before. Studies of temporal trends in status homogamy across countries and historical periods have come to varying conclusions. Kalmijn (1991) finds an increase in educational homogamy and a modest decrease in homogamy with respect to father's social class in the US during the second half of the twentieth century. Smits (2003) finds a stronger decrease in educational homogamy between 1940

and 1980 in more rapidly modernizing countries. van Leeuwen and Maas (2002) find constant homogamy of social origin in nineteenth-century Sweden, save for an increase at the very end of the century. Van de Putte, Oris, Neven, and Matthijs (2005) show varying trends in homogamy of social origin across regions of Belgium during the nineteenth century.

Regarding the measure of and temporal changes in social homogamy in Hungary, we can offer some general statements based on previous literature. In all likelihood, despite all the difficulties in making comparisons owing to differing methods and categorizations of occupational groups, Hungarian society can be characterized as having had a rather high rate of social homogamy at the turn of the nineteenth and twentieth centuries. In 1897, around 65% of couples marrying came from the same socio-occupational category; this proportion was about 85% among landowners (Faragó, 2000, p. 420; Faragó, 2011, p. 62).[2] Concerning the eighteenth and nineteenth centuries, local case studies revealed similar percentages: for example, in the town of Pest in 1788–1790 half of all marrying couples originated from the same occupational group,[3] while the proportion of marriages among partners from the same social group (e.g. artisans and innkeepers) was around 60% (Bácskai, 1979, p. 72). Around 1830, the corresponding proportions were 40% and 77% respectively (Bácskai, 1979, p. 73). Socio-occupational homogamy seems to have decreased in the course of the twentieth century, especially after World War II (Vukovich, 1962). Uunk, Ganzeboom, and Róbert (1996) find a decline in homogamy of social origin in Hungary between 1930 and 1980. Educational homogamy initially increased, followed by a decrease, but it has to be noted that the period they studied corresponded with the period of communism, which has had a considerable impact on the social and demographic structure of Hungary. These findings from earlier studies point towards the dissolution of occupational homogamy by parental status and an increasing role of acquired social position. Modernization, but also increasing religious diversity in local contexts, might serve to explain the changing trends in homogamy in Hungary.

We use newly collected data, the Hungarian Historical Social Mobility File (HHSMF) (Lippényi, Maas, & van Leeuwen, 2013a), to analyse Hungarian historical homogamy patterns. This large-scale data set of marriage records contains information on the occupation of bridegrooms and their fathers, and the occupation of the father of the bride, for 62 municipalities across all regions in modern-day Hungary. In this article, we study the period between 1870 and 1950.

Theory

A historical overview of marriage in Hungary

One important aspect of marrying relates to expectations of running a household together. In Western Europe, certainly, it has long since been common to wait with marriage until a couple had enough savings to live on their own (Hajnal, 1965, 1982). Hungary, lying east of the so-called Hajnal line, should have represented a different marriage type distinguished by early marriage, a very low share of final celibacy (the proportion never married at age 50) and a high percentage of multigenerational households.

The literature relating to the topic is immense.[4] Many authors have emphasized that owing to its geographic, economic, social and cultural heterogeneity Hungary cannot be classified in Hajnal's dichotomy. This is particularly true for household formation rules, but

to some extent for marriage customs too. Age at first marriage in Hungary was low in the eighteenth century; apart from ethno-cultural factors, socio-occupational position and type of settlement (urban or rural) also appear to have been decisive factors in this respect (Faragó, 1998, 2003; Őri, 2009, 2015; Őri & Pakot, 2016). In the nineteenth century, age at first marriage for men increased (to around 26 by 1869) while that for women remained low (around 21 by 1869) (Őri & Pakot, 2014, 2016). In the first half of the twentieth century men married on average at age 26–27 and women at about age 23 (Csernák, 1997; Őri, 2015).

To summarize, early and general marriage and forming complex, multigenerational households cannot be regarded as characterizing Hungary as a whole throughout the entire period. Particularly women and landowning peasants married very young, and the latter remained longer in the parental household. Other layers of society (urban populations, mobile social groups, such as artisans, servants, farmhands and intellectuals) married later, although we see considerable differences in those social strata too. At the same time, the age at marriage increased significantly from the second half of the nineteenth century (Faragó, 2000; Őri, 2015; Őri & Pakot, 2016).

All these differences and changes over time led scholars to conclude that Hungary lay midway between the 'Eastern' and 'Western' models of marriage and household formation (Andorka & Faragó, 1983). We note that the timing of marriage and status-based partner selection were probably both influenced by socio-economic factors, the role of which is likely to have changed during modernization. While we do not analyse the interplay between these processes, we do account for the age of marriage in our analyses.

Expectations about change in status homogamy – economic and cultural explanations

Although economic considerations alone are unlikely to completely explain partner selection – we will discuss cultural and religious considerations below – somewhere in the process of finding a marriage partner such economic considerations are likely to have filtered in. The future earnings capacity of the spouse is a pivotal factor in the economics of mate selection because it has significant consequences for the couple's standard of living. Marrying a partner with the same or a higher social status – as a marker of lifetime earnings or, in the case of women, without an occupational career, of the economic resources of the parents – is thus an understandable wish. Indeed, 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; Hout, 1982; Kalmijn, 1991; Lazarsfeld & Merton, 1954; Maas & van Leeuwen, 2005; Maas, van Leeuwen, Pélissier, & Rébaudo, 2011; McPherson, Smith-Lovin, & Cook, 2001; Pélissier, Rébaudo, van Leeuwen, & Maas, 2005; Smith, McPherson, & Smith-Lovin, 2014; Van de Putte et al., 2005).

But how can one assess the status of a young partner who has not reached his or her full career potential?[5] The status of the family of origin is likely to be the best guess. Spouses can safely expect high-status parents to invest more of their family resources in their children (cf. Breen & Jonsson, 2007), who therefore have a good chance to attain a higher status in society. Furthermore, parents-in-law might also directly benefit the spouse, as they might be willing to transmit resources to the family of their child. Hence, spouses with high-status parents are attractive candidates for marriage. But the relevance for the spouse's status of these parental resources – monetary transfers, social connections, occupational knowledge

and occupational assets such as land, a workshop or animal) – is likely to be a function of the social context. In pre-industrial Europe, the status of the bridegroom's father was an important predictor of the bridegroom's success later in life, whereas in industrializing societies the status of the bridegroom at marriage increasingly became more important as the better predictor of that success (Knigge, Maas, & van Leeuwen, 2014; van Leeuwen & Maas, 2010; Zijdeman & Maas, 2010). In pre-industrial economies farm ownership by parents, and the size of their land, is a good indicator of the expected status of a son or daughter. Farming skills, and the land itself, are important assets that are transmitted from generation to generation. But these assets become less important in industrializing countries, where an increasing proportion of the population no longer works on the land but in an office, a shop or a factory. Under such societal conditions, a young woman and her parents are unlikely to look only at the family background of a male suitor, but also at what he might achieve. Thus, the main hypothesis is that, in industrializing contexts, bridal families increasingly use the bridegroom's own status instead of his father's status to evaluate the bridegroom's future material prospects.

The Hungarian economy, like many other economies around the world, experienced significant developments in industrialization and the mechanization of production at the turn of the twentieth century. Unlike 'native' industrialization in most of Western Europe, industrial and infrastructural development in Hungary was fuelled by capital investment from abroad, most importantly from neighbouring Austria. The Austro-Hungarian Compromise in 1867 created a favourable institutional background for capital investment in industrial and infrastructural development in Hungary. However, the institutions created during the Compromise and the semi-dependent status of Hungary within the Austro-Hungarian Empire conserved the feudalistic characteristics of society, which was a limiting factor in economic development (Berend, 2013). Farming, mostly on large estates owned by the former noble elites or by new capitalists, remained the most dominant economic activity in Hungary, and the bulk of the mechanization occurred in the agriculture and food industries (Berend & Ránki, 1974). High demand for agricultural products in late nineteenth-century urbanizing Western Europe incentivized the development of the economy in this direction as well (Berend & Ránki, 1982).

Despite the agrarian dominance, between 1870 and 1950 the Hungarian economy and society certainly became more industrial (Lippényi, Maas, & van Leeuwen, 2013b). Industrialization of production increased so much that between 1863 and 1884 the use of steam power in Hungarian industry jumped almost eightfold, and the number of factories doubled (from 2700 to 5500 between 1898 and 1913). By 1913 these factories were employing 563,000 workers, up from 302,000 in 1898 (Berend & Ránki, 1974, pp. 60–61). In 1867 iron production was barely 294,000 tons, but that increased to more than two million tons by 1913, and the newly developed steel industry raised its output from 350,000 tons in the 1890s to about 800,000 tons by 1913 (Berend & Ránki, 1974, pp. 57–58). Increased economic activity required capital, which led to the extensive development of banking and financial services. In 1867 the number of credit institutions was just 107, but it rose to 5993 by 1913, with share capital and reserve funds increasing to 2.5 billion crowns, compared with just about 29 million crowns in 1867 (Berend & Ránki, 1974, pp. 36–38). Those figures represent a staggering 90-fold increase in the capitalization of institutions. Hungary's economic development suffered a setback following World War I due to destruction during the war, territorial losses and the Great Depression, which clearly halted the period of economic development

and after which Hungary's economy showed little improvement until the late 1930s (Berend, 1998; Romsics, 1999). Large-scale economic changes, most importantly coercive industrialization of the economy, took place only after World War II, under the communist regime that came to power in 1948. Despite considerable bumps in economic development, Hungary did transition from the fully fledged agrarian economy that it had been until the mid-nineteenth century.

The stratification of Hungarian society reflected both agrarian dominance and industrial transition: high-status bourgeois, professional and estate-owner elites coexisted with a small, predominantly urban, industrial population and a large, but in terms of land size highly diverse, agrarian class (Andorka, 1982; Erdei, 1954/1980). As Hungary industrialized, during the last decades of the nineteenth century and the first half of the twentieth century there was a shift in occupational distribution towards more non-manual and industrial occupations (Lippényi, Maas, & van Leeuwen, 2013b). A recent study has shown that this shift was accompanied by an increase in the social mobility of bridegrooms away from their parental occupational class background, as well as by an increase in the equality of mobility chances (Lippényi, Maas, & van Leeuwen, 2013b).

As with intergenerational mobility patterns, we expect the 'forces' of this industrialization in Hungary to have impacted marriage patterns in society, shifting from the relevance of status ascription to status achievement. This brings us to a hypothesis on the time trend in homogamy in industrializing Hungary (Hypothesis 1a): *Over time, in Hungary, during the late nineteenth and early twentieth centuries there was a shift from homogamy by fathers' status (ascribed characteristic) to homogamy by bridegroom's status (achieved characteristic)*. We also investigate the role of industrialization directly by testing the following hypothesis (Hypothesis 1b): *A higher proportion in a community of the population working in industrial occupations is associated with lower homogamy by fathers' status and more homogamy by bridegroom's status*.

Besides economic considerations, cultural ones are important, too, in choosing a mate. People tend to look for a marriage partner from their own social class because they share similar opinions, friends, childrearing practices and leisure activities (Bourdieu, 1984; Kalmijn, 1998; van Leeuwen & Maas, 2005 and 2010). Arguably, the family and the community exert social pressure in the same direction (cf. Segalen, 1983, p. 41).[6] Modernization theory claims that, over time, cultural differences between social groups in a country have become smaller (Treiman, 1970). Compulsory education, so modernization theory claims, develops a common curriculum and vocabulary that reduces differences in attitudes and behaviour between status groups. The mass spread of literacy makes it possible for various social groups to read and learn about others. These processes might induce a shift from traditional, collectivistic values, which put a high value on institutions such as the church and the family, to more individualistic values (Shorter, 1975). The mechanization of the economy reduces the influence of communities on the distribution of labour opportunities, reducing, too, their control and authority on the marriage choice of younger generations (Goode, 1964, pp. 108–109). Social pressure to marry someone from the same social circles has diminished.

Our expectation is that when cultural differences between status groups become smaller, fathers, bridegrooms and brides use status less as a selection criterion. This is because the power of status to predict preferences and behaviour diminishes, as does the power within communities to enforce status-based selection criteria. The more modern a society is in terms of education and industrialization, the smaller the association between the

occupational status of the father of the bridegroom and the father of the bride becomes, and the smaller the association between the occupational status of the bridegroom and that of the father of the bride.

Compared with the spread of industrialization, that of mass education was even more pronounced in Hungary in the late nineteenth century and the first half of the twentieth century. In the early nineteenth century, the great majority of the Hungarian population were illiterate, but educational reforms were introduced primarily in elementary education through the 1868 Education Act. Elementary education was first extended from four to six years and later, in 1940, to eight years. Efforts were made to eradicate urban–rural educational differences by establishing elementary schools in rural areas. These efforts were successful: illiteracy rates had dropped to 7% by the outbreak of World War II (Dányi, 1964). Farmers, albeit predominantly the wealthier ones who owned land, could afford one of several forms of secondary school for their children (see an overview of the early twentieth-century educational system in Hungary in Simkus and Andorka [1982]). However, secondary schools were generally available only in towns, and academic educational trajectories (the humanities-oriented *Gymnasium* or science-oriented *Reálschool* and university) were for the privileged few. Most of the population, about three-quarters in the late 1920s, experienced only four to six years of elementary education. In the late 1920s, average levels of education in Hungary were still lower than in some of the countries neighbouring it to the northwest, but higher than in the countries to the southeast (Simkus & Andorka, 1982). Although great disparities existed in access to higher levels of education, reforms during this period successfully eradicated illiteracy. Based on modernization theory, we expect industrialization and educational development in Hungary to have ushered in greater cultural homogeneity and a decline in the influence of traditional communities, leading to greater opportunities to marry someone from a different status group.

This brings us to Hypothesis 2a: *Over time, in Hungary, during the late nineteenth and early twentieth centuries both homogamy by fathers' status and homogamy by bridegroom's status decreased*, and Hypothesis 2b: *A higher proportion of the population working in industrial occupations and more educational opportunities is associated with a decrease in both homogamy by fathers' status and homogamy by bridegroom's status*. Note that the economic and cultural arguments lead to different expectations with respect to trends in homogamy by bridegroom's status, and with respect to the influence of industrialization on this type of homogamy.

Status homogamy and religious diversity

The social structure of complex societies and communities involves multiple groups with often intersecting boundaries (Simmel, 1955). People might have preferences about marrying a partner with whom they share a group defined in terms of multiple, potentially overlapping, dimensions (same status, same ethnicity, language and religion for instance). Striving for greater similarity on all dimensions, however, decreases the size of the pool of potential marriage partners. The reason for this is that there are fewer suitable candidates who meet these (narrow) preferences. This is so in all cases, except the one case where the dimensions overlap to such an extent that, for practical purposes, anyone who is of, say, a certain social class is also, say, Protestant, and those who belong to other classes are, say, Catholic (Blau & Schwartz, 1984, pp. 99–196 *passim*). This will likely result in less homogamy

in the population on either dimension than there would have been had there been only one preference. In the absence of a perfectly matched candidate, people are likely to choose someone who is similar, albeit not completely the same, on multiple dimensions of preference, or someone who is the same on one dimension but different on the other: in the Hungarian case, for example, a high-status Jewish bridegroom might settle for a middle-status Jewish bride rather than search for a high-status Catholic bride.

The dilemma faced by those searching for marriage partners on two or more distinct criteria as opposed to only one, notably social status, evidently applies to multi-religious Hungary. While Catholics formed a clear majority, there were considerable regional and municipal differences in the relative size of other religious groups. Protestants constituted the majority of the population in Eastern Hungary, even in larger towns (Debrecen, for instance), while Central Hungary had a higher concentration of Lutherans than elsewhere, and Jews tended to live in larger towns, where their relative numbers were much higher than in the countryside. Hungary had always been a multi-ethnic society, but since 1920 the vast majority of its former ethnic minorities lived outside the borders of post-World War I Hungary.

Religious and social status distinctions corresponded somewhat, typically for Jews who specialized in certain professions.[7] In the nineteenth century, in some villages and small towns Christian denominational distinctions, too, corresponded with occupational differences. For example, on the great Hungarian plain the Reformed population formed the stratum of landowners, while Roman Catholics were mostly landless immigrants (Melegh, 2000).[8] But these differences cannot be generalized, and they became less important in the first part of the twentieth century.

In some instances, Hungarian Jews and Protestants in search of status homogamy faced the dilemma of marrying a Catholic partner, remaining in their community of residence unmarried or taking advantage of the huge expansion in transport facilities that took place in the nineteenth century and commuting or migrating over longer distances within the country, or even embarking on a journey to another foreign country. If they married within their own local and heterogeneous marriage market, they might have had to sacrifice a preference for a certain class to their preference for someone from their own religious group, or vice versa. For example, in some instances Protestant inhabitants within a Catholic community faced the dilemma of either marrying downward someone of the same religion, or marrying someone of their social status but of another religion.

In order to formulate a hypothesis, the possibility of denominational intermarriage deserves consideration. Before the twentieth century denominational intermarriage was a marginal phenomenon in Hungary. The proportion of intermarriages in Hungary has been estimated to have been c.3% in the mid-nineteenth century (Faragó, 2000, p. 422, confirmed by local case studies (see Örsi, 1983, p. 590)). The recently assembled Hungarian Mosaic[9] sample gives valuable information in this respect: in 1869 4.5% of all marriages were denominationally mixed, albeit with considerable regional variation (the proportion of mixed marriages ranging from 1.3% to 8% [Őri & Murinkó, 2013]). Religious denominations differed in their tolerance of intermarriage: Roman Catholics and the Orthodox Church were relatively more closed, while the Lutheran, Greek Catholic and Reformed churches were relatively more open (among them, the proportion of religious intermarriages was around 5–10%). Legal barriers prevented intermarriage between Christians and Jews until 1895, and normative barriers between Christians and Jews remained strong afterwards as well. In 1900

Figure 1. Map of micro-regions in the Hungarian historical social mobility file. Source: Zoltán Lippény.

intermarriage among Christian denominations accounted for 10.5% of marriages within these denominations (in Hungary in that period, excluding Croatia) (the corresponding figure for Budapest was 26.5%). Those proportions rose to in excess of 12% and 30% respectively by the early 1910s (Vital Statistics, 1900–1912).[10] In the 1920s the proportion of religious intermarriages stagnated at around 20% (Vital Statistics, 1919–1932). Thus, religious homogamy decreased considerably in the first part of the twentieth century; by 1930 the proportion of mixed marriages between Christians and Jews was as high as 13% (Vital Statistics, 1919–1932, pp. 26–27).

Based on the theory, and with the qualification of a limited degree of religious intermarriage in Hungary, we formulate the following hypothesis: Hypothesis 3: *A larger proportion of marriage candidates from the same religious group in a community is associated with higher levels of homogamy by both the fathers' status and the bridegroom's status.*

Research design and data

The HHSMF[11] contains marriage records from parish registers from a large-scale sample of 62 municipalities from the territory of present-day Hungary between 1850 and 1950.

We first sampled municipalities from which marriage records were to be digitized. We chose to stratify municipalities before sampling because a simple random sample of marriages would have led to little variation in occupations. At that time, the great majority of Hungarians worked in agriculture, and there were major differences between municipalities in terms of labour structure and modernization (Beluszky, 2002). So, to ensure variation in social-economic contexts and occupation, we stratified Hungarian municipalities based on economic and social development indicators from the 1930 census (% of population in agriculture, % of population in public sector and trade, % of population in domestic service,

literacy, population density, number of industrial establishments and migration) using cluster analysis methods (Lippényi, Maas, and van Leeuwen (2013a) provides a detailed account of the stratification procedures). The list of names of municipalities in the 1930 Hungarian census was used as a sampling frame. That census was taken within the borders of the Hungarian Kingdom and includes all municipalities existing in 1930. The published tables from the 1930 census are the most reliable among pre-World War II census publications with respect to municipal names and statistical accuracy.[12] We distinguished seven municipal strata: rural villages, developing rural villages, urban-type villages, agrarian towns, industrializing towns, developed urban towns and regional centres with municipal rights.[13]

The present-day territory of Hungary is divided into seven large regions: Western Transdanubia, Southern Transdanubia, Central Transdanubia, Central Hungary, Northern Great Plain, Southern Great Plain and Northern Hungary. For each of the seven regions we first randomly selected a maximum of two towns from each of the municipal strata (see Figure 1).[14] For three of the larger regions, also randomly selected, we sampled one regional centre with municipal rights, and we included two future districts from the capital city of Budapest. Budapest had a highly populous metropolitan agglomeration, and representing the different parts of Budapest and that of the agglomeration separately was not feasible given the resources available for the data collection. We chose to sample from the agglomeration, which was merged with the city in 1950, but the reader should note that this does not represent the inner districts of Budapest. The districts we chose had a large area and a fairly heterogeneous labour population, and they do represent the population of Budapest's urban agglomeration. In the original sampling plan, we included Újpest, from 1950 a district of Budapest, as digitized marriage records were already available for parishes there. However, for a long period Roman Catholic marriage registers in Újpest neglected to include occupational information, so we randomly selected another town, Rákospalota, which likewise became a district of Budapest in 1950.

After taking samples from towns and cities, we proceeded to take them from villages too. Hungary's territory is divided into 174 statistical micro-regions, each micro-region having a larger town or city as its centre. The micro-regions were used during sampling, and for each town we selected one or two villages from the same micro-region of that town. We used the same procedure we had used for selecting cities: per micro-region choosing one to three villages from each municipal stratum. The number of villages per stratum was selected based on the distribution of populations in different municipal types. To represent villages that are not in the vicinity of a larger town, we selected three additional villages[15] from micro-regions that had a smaller town as regional centre.

As small rural villages had very low numbers of marriages, to optimize data collection we excluded municipalities with fewer than 1000 inhabitants from the sampling frame (altogether approximately 11% of the population in 1930). Inspection of municipal indicators indicated only minor differences in modernization and demographic indicators between such villages and those that had a slightly larger population (between 1000 and 3000), so we reasoned that their exclusion would not distort the sample.

We also wanted to ensure that the number of 'digitized marriages' did not differ greatly between sampled municipalities and that it was evenly distributed across time. For each village, we targeted a sample size of 400 to 1000 marriages, and between 800 to 3000 marriages in the case of towns. Since in some larger towns and periods there were too many marriages, further random sampling of marriages was necessary. To do that, we calculated a

sampling interval beforehand for each year, each denomination and each municipality, taking into account the distribution of marriages across parishes if there were multiple parishes of the same denomination. During the digitization those sampling intervals were used to digitize every second, third, etc. marriage record in the marriage register. Our method allowed us to balance the number of observations in the sample across municipalities and periods.

For each municipality selected we proceeded by digitizing the marriage records in the marriage registers. The four largest religious denominations in Hungary – the Roman Catholic Church, the Hungarian Reformed Church, the Lutheran Church and Hungarian Israelite Church – all kindly provided access to their marriage registers. The registers of two smaller denominations, the Greek Catholics (2%) and Greek Orthodox (0.5%), did not contain information about occupations. Marriages of the populations living on the periphery of municipalities (*puszta*, *határ* or *szél* in Hungarian) were in most cases registered in the church registers of one of the municipal parishes, and we digitized those too. Where two or more larger municipalities merged or separated during the investigation period, we digitized the parish records from both, and we included marriages in municipal parishes that were actually founded within the sampled municipalities during the period under investigation.

Only those marriage records were digitized that gave us the occupations of both the bridegroom and his father. The number of marriages with missing occupations, as well as which occupation was missing (father's, bridegroom's or both), were recorded during coding; that data can be obtained from the principal investigator on request. The amount and pattern of missing information showed no systematic variation across municipal strata.

Due to the lack of availability of modernization indicators in the earlier periods for which marriage records were digitized (1850–1869), we restricted the analysis to the years between 1870 and 1950. From the 83,460 marriages remaining we omitted 16,200 that were registered in the parish but conducted in another municipality, because brides and bridegrooms were likely to have been brought up in a municipality other than their place of marriage, and thus our explanatory variables, measured for the municipality of marriage, would not accurately reflect their circumstances.

We focus on first marriages because, in the case of later marriages, the age of spouses, circumstances concerning how the first marriage ended, the presence of children and the wealth of the former spouse complicate the analysis of the role of status and religion. As information on the marital status of the engaged couple was sparse in the data set, we excluded bridegrooms who are older than 40 and who were likely to have been married before. We also excluded a small number of spouses younger than 17. The age restrictions resulted in a loss of 3721 cases. We excluded 13,358 cases that did not list the occupation of the bridegroom, or that of the parents of the bridegroom or bride, or where the occupations given were too vague to code. In total, our analysis contains 50,181 marriage records.

Measures

We coded the *occupation of the father of the bride* (dependent variable) and the *occupations of the bridegroom and father of the bridegroom* (independent variables) to HISCO (van Leeuwen, Maas, & Miles, 2002) and assigned occupational status scores to these variables using the historical version of the Cambridge occupational status scale (HISCAM version 1.3.1 [Lambert, Zijdeman, Van Leeuwen, Maas, & Prandy, 2013]). We use the HISCAM scale scores derived from data on males from multiple countries for the period 1890–1938, as

Table 1. Descriptive statistics of individual- and contextual-level variables in the analyses.

Variable	Mean	SD	Min	Max	% missing
DEPENDENT VARIABLE					
Occupational status father of bride	51.25	6.55	37.35	99	15.5
INDEPENDENT VARIABLES – INDIVIDUAL LEVEL					
Occupational status bridegroom	52.05	7.79	37.35	99	3.4
Occupational status father of bridegroom	51.36	6.63	37.35	99	3.5
CONTROL VARIABLES – INDIVIDUAL LEVEL					
Bridegroom's age	25.56	4.09	17	40	–
Bridegroom migrated (%)	7.08				–
Bridegroom's religious denomination:					
Jewish (%)	1.42				–
Lutheran (%)	2.35				–
Reformed (%)	11.22				–
Roman Catholic (%)	85.01				–
INDEPENDENT VARIABLES – CONTEXTUAL LEVEL					
Relative size bridegroom's religious group	0.75	0.24	0	1	–
Educational opportunity (n of teachers)	5.07	5.42	0	34	–
Industrialization (proportion non-agrarian manual workers)	0.37	0.23	0	1	0.01
CONTROL VARIABLES – CONTEXTUAL LEVEL					
Population size (10,000)	4.82	17.98	0.07	171.1	–
World War I period (%)	4.49				–
World War II period (%)	17.52				–

Note: N analytical data set = 50,181. N complete data set following temporal and age restrictions = 63,539.
Source: HHSMF.

HISCAM corresponds best with our period of study. Using international occupational status scales estimated on a different data source has the advantage that this does not inflate the association, which could otherwise occur when estimating HISCAM and the status homogamy association on the same data set.

Modernization and religious composition vary over time within municipalities, and we measure their effects by taking into account relevant birth cohort variation (in how education and industrialization influence preferences during upbringing) or marriage cohort variation (in how religious group size presents constraints at the time of marriage).

We capture *educational opportunities* by calculating the number of elementary school teachers married in the municipality of marriage when the subsequent bridegroom had been aged between six and 16. This period was chosen to correspond with the life period when young people potentially received schooling. We assumed that teachers teach for 30 years when we counted their number in a municipality at a given time point.[16] *Industrialization* is measured by the relative size of the non-agrarian manual male workforce that married in a municipality in the period when the bridegroom was aged between 15 and 25. *Size of religious group* is measured by the relative size of the religious group (Catholic, Reformed, Lutheran, Jewish) of the bridegroom in the municipality of marriage at the time of the marriage. We used decennial Hungarian censuses and interpolation as the source of this variable. The two former variables were calculated from the HHSMF.

When establishing how contextual factors influence homogamy, we take into account a number of possibly confounding factors. We control for *population size* at marriage date, measured by census counts of the number of inhabitants at the time the bridegroom married and for the periods of *World War I* (1914–1918) and *World War II* and its aftermath (1939–1950). We additionally include the *bridegroom's age at marriage*, whether the bridegroom was *born in a municipality different* from the municipality of marriage and the *religious affiliation* of the bridegroom. Table 1 shows the descriptive statistics.
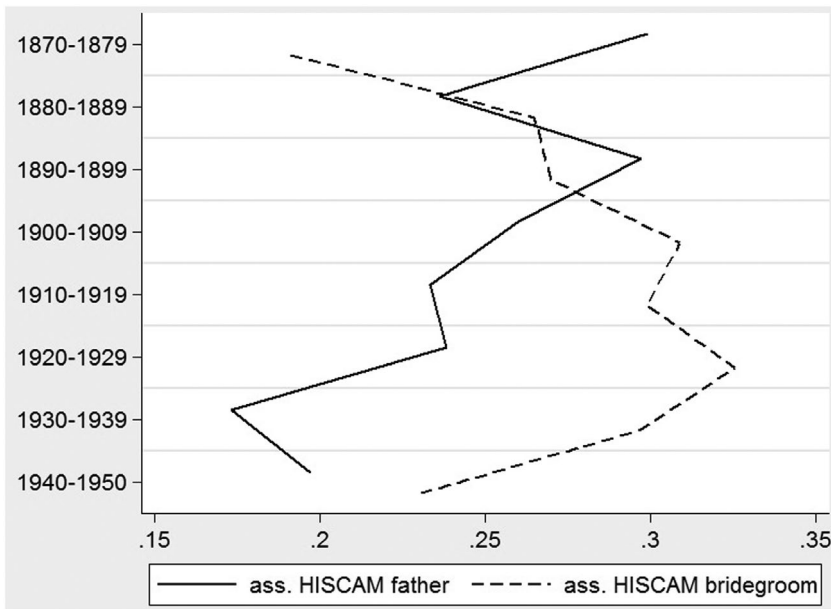
Figure 2. Over-time changes in social homogamy (father of the bride by the status of the bridegroom and by that of his father) in Hungary, 1870–1950.
Notes: Status homogamy association parameters estimated year-by-year in linear regression models that included fixed-effects for municipality.
Source: HHSMF.

Results

The temporal variation in status homogamy in Hungary

Figure 2 shows the dynamics of homogamy over time by the status of the bridegroom and by the status of his father between 1870 and 1950 (see the notes to Figure 2 on estimation). The association between the status of the bride's father and that of the bridegroom's father decreased in a fairly linear fashion by one-third, from 0.3 in the period 1870–1879 to 0.2 in the period 1940-1950. This decrease is in line with what we expected based on the economic and cultural aspects of the theory of industrialization, but also based on the assumed effect of increasing religious diversity on social homogamy. We find partial support for our expectation that the importance of the bridegroom's status would increase relative to the importance of the status of the bridegroom's father: the former's association with the status of the bride's father steadily increased until the 1920s. However, in the 1930s and 1940s it declined, paralleling the decrease in homogamy by the status of the bridegroom's father. Occupational status homogamy by father's occupational status gave way to homogamy by the bridegroom's status during the period of industrialization from the late nineteenth to the early twentieth century, supporting our first hypothesis based on the economic argument. However, in later decades, homogamy with respect to both the status of the father and that of the bridegroom decreased, supporting our second hypothesis based on the cultural argument. The overall importance of status in marital partner choice decreased in the period.

Table 2. Multilevel linear regression of status of bride's father on status of bridegroom's father and his own status, Hungary 1870–1950.

	Model 1	Model 2
Status father of bridegroom (centred)	0.25***	0.26***
	(0.01)	(0.01)
Status bridegroom (centred)	0.31***	0.31***
	(0.01)	(0.01)
Father X industrialization		−0.14***
		(0.03)
Bridegroom X industrialization		0.02
		(0.03)
Father X educational opportunity		−0.00+
		(0.00)
Bridegroom X educational opportunity		0.01***
		(0.00)
Father X relative size religious group		0.03
		(0.02)
Bridegroom X rel. size religious group		0.06***
		(0.02)
Bridegroom age	0.03***	0.03***
	(0.01)	(0.01)
Born elsewhere	−0.02	−0.01
	(0.09)	(0.09)
Jewish (ref: Catholics)	3.55***	3.88***
	(0.29)	(0.30)
Lutheran (ref: Catholics)	0.30	0.32+
	(0.23)	(0.23)
Reformed (ref: Catholics)	0.07	0.09
	(0.15)	(0.15)
Industrialization (centred)	−0.23	−0.25
	(0.22)	(0.22)
Educational opportunity (centred)	0.00	0.00
	(0.01)	(0.01)
Relative size religious group (centred)	−0.49+	−0.54***
	(0.25)	(0.25)
WWI period	−0.22+	−0.22+
	(0.13)	(0.13)
WWI period X father	−0.00	0.00
	(0.04)	(0.04)
WWI period X bridegroom	−0.05	−0.05
	(0.03)	(0.03)
WWII period	0.06	0.05
	(0.12)	(0.12)
WWII period X father	−0.02	−0.02
	(0.03)	(0.03)
WWII period X bridegroom	−0.04	−0.04
	(0.03)	(0.03)
Population size (10,000, centred)	0.02***	0.02***
	(0.00)	(0.00)
Intercept	50.90	50.92
σ^2 (father HISCAM)	0.24***	0.24***
σ^2 (bridegroom HISCAM)	0.24***	0.24***
σ^2 (intercept)	0.30***	0.29***
σ^2 (residual)	5.05***	5.05***
N of observations	50181	50181
N of communities	3541	3541

Note: Model 1 chi-squared (df) = 4,618 (83). Model 2 chi-squared (df) = 4,725 (89). Standard errors are in parentheses. Models include municipality fixed effects and interactions of status bridegroom with marriage year and marriage year squared, and status father of bridegroom with marriage year. Marriage year interaction effects show the same pattern as that reported in Figure 1 and, for considerations of space, are not reported here. We specified the covariance matrix of random intercept and slope to be diagonal. $^+$ p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.01.
Source: HHSMF.

The effect of modernization on status homogamy

Marriages take place at a certain point in time, in a certain location; we define this as the context of the marriage. To capture the temporal-spatial dimension of the context, we generated 3541 unique combinations of municipality and year of marriage in our data. We measure all independent contextual variables (industrialization, educational opportunity, religious group size) as varying over time within municipalities and include indicators for each municipality in our models. An important added advantage of this approach is that some aspects of the spatial location, such as natural resources, proximity of the border or there being a large town nearby, do not vary over time, and therefore cannot explain how changes in modernization over time relate to changes in homogamy over time. Modernization, religious group sizes and homogamy change over time, and though purely spatial characteristics do not they might influence modernization and the strength of homogamy similarly, producing a spurious relationship. We account for these 'pure' location effects by using indicator variables representing each municipality of marriage (i.e. fixed effects). The municipal indicator variables also eliminate possible data design bias by changes over time in the municipal composition of the sample due to non-registration of occupation in certain periods in certain municipalities. Our model also includes linear and quadratic time interactions with homogamy to account for common (and possibly confounding) temporal trends that were similar in all municipalities.

We accounted for nesting of marriages in contexts by estimating hierarchical regression models. We specify random variation in homogamy (i.e. the regression effect on homogamy of the status of the bridegroom's parents and the bridegroom's own status) by context, and include interactions between the status of the father and that of the bridegroom, and contextual variables, to model the hypothesized differences in homogamy caused by modernization and religious group size.[17] Our model captures variations in homogamy across temporal-spatial contexts, and how contextual independent variables (varying over time within the place of marriage) influence the strength of homogamy.[18]

Model 1 of Table 2 includes the individual- and contextual-level factors and controls, and interactions of homogamy with time and with World-War marriage cohorts, to model time trends and possible war period effects. Model 2 includes the interactions between modernization, religious group size and homogamy to test the hypotheses of modernization and religious composition. Supporting the cultural argument of the theory of industrialization, we find that a greater proportion of the population with an industrial occupation is related to lower homogamy by the bridegroom father's status, although homogamy by bridegroom's status does not vary across more and less industrialized contexts. Keeping all other individual and contextual factors at their sample average, a 10% increase in industrial population is associated with a 4.6% decrease in homogamy by father's status $((0.26 - 0.14 / 10)/0.26 = 0.046)$. We find only weak, marginally significant evidence that increasing educational opportunity leads to a decline in homogamy by father's status. In contrast, the findings for bridegroom's status homogamy suggest that the relevance of status increases with more educational opportunity. We find slightly higher status homogamy by bridegroom's status in contexts with greater educational opportunity. The findings suggest that educational expansion ushered in a very small decline in the importance of status of family origin in Hungary, and led to a more pronounced increase in the importance of achieved occupational status.

Religious group size is positively related to status homogamy by bridegroom's occupational status, but homogamy by father's status is similar in both small and large religious groups (Model 2). These findings lend partial support to the hypothesis that the extent of status homogamy is influenced by the opportunity to marry someone similar with respect to social categories.

Is the association between modernization and homogamy in Hungary partially spurious due to greater religious diversity in a more modern context? Less industrialized communities in Hungary were indeed less diverse: in our data set the correlation between industrialization and group size is -0.19. While the differences in status homogamy by industrialization remain unchanged when we exclude the differences in homogamy by religious group size from our model, the differences in status homogamy by family origin become significantly smaller in communities with greater educational opportunity (the results are not shown). Religious heterogeneity is not only associated with more modern contexts, it also partially explains away the impact of modernization, in particular educational opportunity, on status homogamy.

Discussion and conclusion

This article studied status homogamy in Hungary in the late nineteenth and early twentieth centuries. We focused on temporal trends in homogamy, and possible explanations in terms of modernization. The article also addressed a less frequently studied aspect of homogamy, namely how the opportunity structure to marry someone from one's own religious group influences the extent to which people married someone of a similar status. Hungary is a good case study, due to both the modernization it experienced during this period and the varying degree of religious diversity of its different communities. We found that homogamy by father and bridegroom status decreased, though in the case of the latter following a period of increase. These findings are in line with those of some of the earlier literature, which argued that an initial decline in homogamy indicates the declining importance of parental status but not of status per se (as predicted by the economic argument), while subsequent decline indicates the decreased importance of status in marital choices – as predicted by the cultural argument (cf. Smits, Ultee, & Lammers, 1998). Importantly, this decline in homogamy predates the shift in political regime following World War II. Rather than a consequence of political change, the declining importance of the status of the son might reflect a decline in the importance attributed to status in marital preferences in a modernizing society.

Supporting the cultural argument behind the theory of modernization, the Hungarian case shows that more industrial social contexts are characterized by lower homogamy, but we found this effect only for the status of family origin. Unexpectedly, status homogamy by bridegroom's status is higher in contexts with greater educational opportunity. This finding rhymes with arguments from theoretical economics which claim that educational institutions lead to greater meritocracy in access to occupational careers and mate selection at the expense of family status (Whelan & Layte, 2002) and do not indicate that educational opportunity decreased the importance of status in marriage partner selection.

Our results highlight the importance of taking religious group size into account when studying social status homogamy. Religious group size constrains status-similar marriage choices as expected: in larger religious groups the extent of status homogamy is higher. In smaller religious communities (such as Hungary's Protestants), this finding is explained by

the difficulty experienced by minority members in finding a partner who satisfies preferences for similarity on the two dimensions of social status and religion. The finding highlights the importance of accounting for the multiplicity of the opportunity structure when studying outcomes of individual choice, such as status homogamy. An additional reason to consider group distinctions such as religion in studies of status homogamy is that we found modernization (educational opportunity in particular) had a stronger influence when not accounting for religious group size in our models. More modernized communities are also religiously more diverse, and, hence, research that fails to account for the opportunity structure on non-status group distinctions might reach wrong conclusions about the relationship between modernization and status processes.

To bring research forward, it would be interesting to study whether religious group or status group membership matters more in marital choices, and how that changed over time. A study similar to the present one, addressing how status group size influences the extent of religious homogamy, could be the first step in this. We should note here that, due to data access restrictions, the HHSMF does not provide information on an individual's religious affiliation. Another fruitful avenue could be to investigate to what extent religious groups were segregated by social-cultural or geographic barriers within communities. Due to shared religious customs, for instance, Lutherans and Catholics intermarried more often than other groups. Jews, but also other minority religious communities, often lived in isolated neighbourhoods in towns or in streets in villages, which undoubtedly influenced their chances of meeting and forming a relationship.

The opportunity structure of a marriage market is not, however, purely a twist of fate. It is open to human intervention: people might decide to keep on looking longer and to postpone marriage, or even refrain from marriage, or they might decide to search and possibly to migrate over longer distances (Lewis & Oppenheimer, 2000). Spatial exogamy (marriage-related migration) might have led to the desired socio-occupational or denominational endogamy, although spatial exogamy in Hungary may have been stronger in the eighteenth century (in the period of the country's repopulation after the Turkish wars) than in the nineteenth. According to Benda's findings (Benda, 2008, p. 143), in the town of Keszthely in the early nineteenth century 14–18% of all marriages were exogamous (regarding the place of residence). In larger settlements, the corresponding figure was 10–20% in the eighteenth to the nineteenth century, while in smaller ones it could reach 30–35% (Örsi, 1983, p. 580). According to estimates from the Hungarian Mosaic sample, in 1869 spatial exogamy (based on the place of birth) was between 20 and 65%, but showed very strong regional heterogeneity (Őri & Murinkó, 2013). Jews (one of the smallest groups) were the most mobile among religious communities, but Roman Catholics (the largest group by far) were second with regard to spatial exogamy. In the twentieth century spatial exogamy increased considerably, though most especially during the state-supported surge in urban industrialization in the early socialist period of the 1950s, later than the period analysed here. We leave to future research the intriguing question of how spatial patterns of homogamy strengthen or weaken social patterns of homogamy.

A few observations should be made regarding our data source. In Hungary, compulsory civil registration of marriages was introduced in 1895. However, after 1 January 1907 civil marriage records no longer contained details of parental occupation, so they are not suitable for studying intergenerational mobility after this date. We therefore used only church marriage records. The registration of marriages, which the churches continued to do even after

the introduction of civil registration in 1895, was the responsibility of the local church official and was carried out in the presence of the bridegroom, bride and the witnesses. Until the communist period, Hungary had seen little in the way of secularization, although changes in demographic behaviour might indicate a decline in the influence of the church and religion on Hungarian society – and in particular urban society (Tomka, 2013). These changes include the spread of birth control and the decline in fertility from the nineteenth century onwards, and this accelerated after 1880. Furthermore, the proportion of children born out of wedlock increased between the two world wars. Despite this gradual erosion, the social and political influence of the churches remained substantial, and the overwhelming majority of the population were members of an official church: in 1941, the proportion of the population outside the official churches was less than 0.1% (census data on religion). We are confident, therefore, that church records are representative for the purpose of analysing status endogamy/exogamy in Hungary in the late nineteenth and early twentieth centuries.

The data set contains information on marriages solemnized within the borders of present-day Hungary, which was established in 1920. As we studied variation across contexts within Hungary's regions, this restriction is unlikely to influence our results. We note, however, that ethnic diversity was greater in pre-World War I Hungary than within its post-war borders. Religious differences coincided with differences in language and ethnicity in some of the regions outside our sample (for example, in the case of the Catholic Hungarians and Greek Orthodox Serbians of Novi Sad or the Protestant-Catholic Hungarians and Greek Catholic Romanians in Transylvania), while in other cases ethnic-language differences did not coincide with religious differences (with Roman Catholic Hungarians and Slovakians in southern Slovakia for instance). We encourage the extension of the HHSMF to include regions forming part of present-day Romania, Slovakia and Serbia.

The study of such rich variations is a great prospect for social historical research on status homogamy (on this research question in the Belgian context, see also the study by Maas and van Leeuwen in this special issue). It will allow an even more stringent test of our main conclusions: that modernization decreased cultural differences and thereby status homogamy in general; that educational expansion increased the importance for marriage choices of the bridegroom's status; and that being a religious minority hampers one's chances of status homogamy, but that increasing religious diversity does not interfere with the effects of modernization.

Notes

1. The statistics are based upon the 1930 Hungarian Census. We consider here the present-day territory of Hungary, to which marriage register data used for this article pertain. There were also smaller denominations, including Greek Catholics (2%) and the Greek Orthodox (0.5%), but either their marriage registers did not include information about occupations, or these denominations were omitted due to their small size.
2. The social-occupational categories in the vital statistics included intellectuals, landowners, farmers, miners, industrial workers, merchants and farmhands.
3. Note that in only one-fifth of all cases could the occupational affiliation of both partners be identified; furthermore, the percentages depend much on the class scheme used. The occupational groups used in the analysis were as follows: farmers, artisans, public catering, traffic, merchants, office-holders, intellectuals, noblemen, soldiers, farmhands, workers, real estate proprietors and others. The categories were based on the marriage registers. Broader social groups were also created: artisans and innkeepers (public catering), intellectuals and office-holders, farmers and domestic servants, etc. (Bácskai, 1979).

4. For a summary of the research relating to Hungary, see Faragó (2003) and Őri and Pakot (2014).
5. Occupational careers were, of course, very different for men and women in this period, and therefore so, too, were expectations about contributing to family income. However, the status of parents-in-law is irrelevant both for young brides and for bridegrooms. For bridegrooms, status might be especially relevant, given that Hungarian women, once married, were typically homemakers and did not contribute much income from paid labour to the household. Hence, whether a spouse's contribution is high or low, parental resources – such as any future inheritance or connections – are relevant.
6. One could argue in a similar way that culture plays a role in the choice of a marriage partner from the same religion. As we aim to focus on status homogamy, however, we outline cultural considerations that have to do with one's status position.
7. In the countryside, Jews were typically merchants, traders, shopkeepers or innkeepers, while in towns they worked in commerce, industry or finance, or as intellectuals (as doctors, lawyers and journalists, etc.).
8. When considering territories outside present-day Hungary, we find that there were other social dimensions strengthening separation between religious groups: in Transylvania (part of present-day Romania), Upper Hungary (part of present-day Slovakia) and Vojvodina (part of present-day Serbia) denominational differences often coincided with ethnic ones. In Transylvania, for example, Orthodox and Greek Catholic populations consisted of Romanians; Reformed and Roman Catholics were Hungarians; and Lutherans were Germans (Saxons). In some regions, denominational and ethnic separation coincided with social differences as well: Orthodox Romanians and Serbs or Lutheran Slovaks were either smallholders or landless, whereas larger land properties and positions of political, social-cultural leadership were held by Roman Catholic or Protestant Hungarians. But such sharp ethno-religious-status distinctions did not exist in the present-day territory of Hungary, on which our study focuses.
9. This sample is based on the individual-level data from the 1869 census and contains more than 30,000 individuals (Őri & Pakot, 2014). Intermarriage was studied on the basis of the data relating to more than 5000 married couples.
10. The aggregate-level statistics of the period did not differentiate rates of intermarriage among Christian denominations. Mosaic data for 1869 show that the Orthodox population (non-Hungarian ethnic groups and rural population) were the most closed and the two Protestant denominations the most open; this holds for both Reformed/Lutheran marriages and Protestant/Roman Catholic marriages (Őri & Murinkó, 2013).
11. The following draws on Lippényi, Maas, and van Leeuwen (2013a).
12. Personal communication from Tamás Faragó (Corvinus University of Budapest).
13. Our sample also includes small villages where modernization processes (industrialization, expansion of mass education) occurred to a much smaller extent than in towns. However, over the course of the 80 years covered in our study, quite a number of small villages industrialized and grew to become towns (such as Hatvan in Pest county). In addition, villages where industrialization did not occur serve as a contrast to towns when we evaluate how the development in industrialization relates to changes in status homogamy. If villages were to be excluded from the data set, there would be much less variation in industrial development to test our main hypotheses on the relation of industrialization to homogamy.
14. For the southern Hungarian town of Kalocsa, two surrounding villages and their outskirts, marriage records had already been digitized by the historical archives of the Kalocsa Archbishopric, and these were put at our disposal.
15. These villages were Szulok, Tataháza and Köveskál (the neighbouring village, Szentbékkálla, was also included as it shared the same Roman Catholic parish as Köveskál).
16. This measure of educational opportunities has been validated in an earlier study (Lippényi, Maas, & van Leeuwen, 2015).
17. The random-slope multilevel model is specified as follows:
$$HISCAMfofbride_i = Municipality_t + \beta_{jt} \times HISCAMfandgroom_{ijt} + \mu_{jt} + \varepsilon_i$$
$$\beta_{jt} = \gamma \times MODERN_{jt} + \delta \times RELIGIOUS_{jt} + \tau_{jt.}$$

       Subscript i denotes the individual marriage, j the marriage cohort and t the municipality. Homogamy coefficients by father and bridegroom status (β_{jt}) are specified to have random variation across cohort and municipality. We explain this variation with modernization indicators (educational opportunity and industrialization) and religious group size. The model adjusts for time-stable municipal differences in occupational statuses with municipality indicators, and for common time trends in homogamy with time and occupational status interactions.

18. Lippényi, Maas, and van Leeuwen (2015) used an approach similar to that applied in this article.

Acknowledgments

Disclosure statement

No potential conflict of interest was reported by the authors.

References

Andorka, R. (1982). *A társadalmi mobilitás változásai Magyarországon* [Changes in social mobility in Hungary]. Budapest: Gondolat.

Andorka, R., & Faragó, T. (1983). Pre-industrial household structure in Hungary. In R. Wall, Richard Wall, & P. Laslett (Eds.), *Family forms in historic Europe* (pp. 281–308). Cambridge: Cambridge University Press.

Bácskai, V. (1979). Pest társadalomtörténetének vizsgálata a házasságkötések alapján (1735–1830) [A study of the social history of Pest on the basis of marriages (1735–1830)]. *Tanulmányok Budapest múltjából XXI* [Studies from Budapest's past XXI] (pp. 49–104). Budapest: Néprajzi Múzeum.

Beluszky, P. (2002). *The spatial differences of modernisation in Hungary at the beginning of the 20th century*. Discussion Paper No. 37. Pécs: Centre for Regional Studies of the Hungarian Academy of Sciences.

Benda, G. (2008). *Zsellérből polgár. Keszthely társadalma, 1740–1849* [From serf to bourgeois. The society of Keszthely, 1740-1849]. Budapest: L'Harmattan.

Berend, I. T. (1998). *Decades of crisis: Central and Eastern Europe before World War II*. Berkeley: University of California Press.

Berend, I. T. (2013). *An economic history of nineteenth-century Europe: Diversity and industrialization*. Cambridge: Cambridge University Press.

Berend, I. T., & Ránki, G. (1974). *Hungary. A century of economic development*. New York, NY: Barnes & Noble Books.

Berend, I. T., & Ránki, G. (1982). *The European periphery and industrialization, 1780–1914*. Cambridge: Cambridge University Press.

Blau, P. M., & Schwartz, J. E. (1984). *Crosscutting social circles*. New York, NY: Academic Press.

Bourdieu, P. (1984). *Distinction: A social critique of the judgment of taste*. London: Routledge.

Bras, H., & Kok, J. (2005). 'They live in indifference together'. Marriage mobility in Zeeland, The Netherlands, 1796–1922. *International Review of Social History, 50*, 247–274.

Breen, R., & Jonsson, J. O. (2007). Explaining change in social fluidity: Educational equalization and educational expansion in twentieth-century Sweden. *American Journal of Sociology, 112*, 1775–1810.

Bull, H. H. (2005). Deciding whom to marry in a rural two-class society: Social homogamy and constraints in the marriage market in Rendalen, Norway, 1750–1900. In M. van Leeuwen, I. Maas, & A. Miles (Eds.), *Marriage choices and class boundaries: Social endogamy in history* (pp. 43–63). Cambridge: Cambridge University Press.

Csernák, M. (1997). Házasság és válás Magyarországon. [Marriage and divorce in Hungary]. In J. Kovacsics (Ed.), *Magyarország történeti demográfiája 896–1995* [Historical demography of Hungary, 896–1995] (pp. 341–362). Budapest: KSH.

Dányi, D. (1964). Az írás-olvasás elterjedése Magyarországon [The diffusion of literacy in Hungary]. *Demográfia, 7*, 310–313.

Erdei, F. (1954/1980). A magyar társadalom a két világháború között [Hungarian society during the interwar years]. In K. Kulcsár (Ed.), *A magyar társadalomról* [Hungarian society] (pp. 347–372). Budapest: Akadémia.

Faragó, T. (1998). Kinship in rural Hungary during the eighteenth century: The findings of a case study. *The History of the Family, 3*, 315–331.

Faragó, T. (2000). Nemek, nemzedékek, rokonság, család [Gender, generation, kinship, family]. In M. Sárkány & M. Szilágyi (Eds.), *Magyar Néprajz VIII. Társadalom* [The ethnology of Hungary VIII. Society] (pp. 393–483). Budapest: Akadémiai Kiadó.

Faragó, T. (2003). Different household formation systems in Hungary at the end of the eighteenth century: Variations on John Hajnal's thesis. *Demográfia, 46*, 144–178.

Faragó, T. (2011). *Bevezetés a történeti demográfiába* [Introduction to historical demography]. Retrieved from http://www.tankonyvtar.hu/hu/tartalom/tamop425/0010_2A_09_Farago_Tamas_Bevezetes_a_torteneti_demografiaba/adatok.html.

Goode, W. (1964). *The family*. Englewood Cliffs: Prentice-Hall.

Hajnal, J. (1965). European marriage patterns in perspective. In D. V. Glass & D. E. C. Eversley (Eds.), *Population in history* (pp. 101–143). London: Edward Arnold.

Hajnal, J. (1982). Two kinds of preindustrial household formation system. *Population and Development Review, 8*, 449–494.

Hout, M. (1982). The association between husbands' and wives' occupations in two-earner families. *American Journal of Sociology, 88*, 397–409.

Kalmijn, M. (1991). Status Homogamy in the United States. *American Journal of Sociology, 97*, 496–523.

Kalmijn, M. (1998). Intermarriage and homogamy: Causes, patterns, trends. *Annual Review of Sociology, 24*, 395–421.

Katus, L. (2010). *A modern Magyarország születése – Magyarország története 1711–1914* [The birth of modern Hungary – the history of Hungary, 1711–1914]. Pécs: Pécsi Történettudományért Kulturális Egyesület.

Knigge, A., Maas, I., & van Leeuwen, M. H. D. (2014). Sources of sibling (dis)similarity: Total family impact on status variation in the Netherlands in the nineteenth century. *American Journal of Sociology, 120*, 908–948.

Lambert, P., Zijdeman, R. L., Van Leeuwen, M. H. D., Maas, I., & Prandy, K. (2013). The construction of HISCAM: A stratification scale based on social interactions for historical comparative research. *Historical Methods: A Journal of Quantitative and Interdisciplinary History, 46*, 77–89.

Lazarsfeld, P., & Merton, R. K. (1954). Friendship as a social process: A substantive and methodological analysis. In T. A. Morroe Berger, T. Abel, & C. H. Page (Eds.), *Freedom and control in modern societies* (pp. 18–66). New York, NY: Van Nostrand.

Lewis, S. K., & Oppenheimer, V. K. (2000). Educational assortative mating across marriage markets: Non-Hispanic whites in the United States. *Demography, 37*, 29–40.

Lippényi, Z., Maas, I., & van Leeuwen, M. H. D. (2013a). Creating the Hungarian Historical Social Mobility File: Historical social structure and mobility beyond the Leitha. *Istoritcheskaya Informatik* [Journal for Historical Informatics]*, 4*(2), 3–24.

Lippényi, Z., Maas, I., & van Leeuwen, M. H. D. (2013b). Intergenerational class mobility in Hungary between 1865 and 1950. Testing models of change in social openness. *Research in Social Stratification and Mobility, 33*(September), 40–55.

Lippényi, Z., Maas, I., & van Leeuwen, M. H. D. (2015). Modernization and social fluidity: A test of the thesis of industrialization. *European Sociological Review, 31*(1), 103–114.

Maas, I. & van Leeuwen, M. H. D. (2005). Total and relative endogamy by social origin: A first international comparison of changes in marriage choices during the nineteenth century. *International Review of Social History, 50*, 275–295.

Maas, I., van Leeuwen, M. H. D., Pélissier, J.-P., & Rébaudo, D. (2011). Economic development and parental status homogamy: A study of 19th century France. *The History of the Family, 16*, 371–386.

McPherson, M., Smith-Lovin, L., & Cook, J. M. (2001). Birds of a feather: Homophily in social networks. *Annual Review of Sociology, 27*, 415–444.

Melegh, A. (2000). *Kiskunhalas népesedéstörténete a 17. század végétől a 20. század elejéig.* [The population history of Kiskunhalas from the end of the seventeenth century up to the beginning of the twentieth century]. *KSH NKI Kutatási Jelentések, 65*. KSH NKI: Budapest.

Őri, P. (2009). Marriage customs and household structure in Hungary at the end of the 18th century. The case of county Pest-Pilis-Solt (1774–1785). In A. Fauve-Chamoux & I. Bolovan (Eds.), *Families in Europe between the 19th and the 21st centuries. From the traditional model to contemporary PACS* (pp. 167–192). Cluj-Napoca: Cluj University Press.

Őri, P. (2015). Long-term demographic change and local socio-cultural patterns: Marriages and household structure in 18–20th century Hungary. *Przeszłość Demograficzna Polski, 37*, 7–37.

Őri, P., & Murinkó, L. (2013). *Denominational and spatial endogamy/exogamy in historical Hungary, 1869*. Paper presented at the conference 'Mixed marriages throughout history', Cluj-Napoca, Romania.

Őri, P., & Pakot, L. (2014). *Residence patterns in nineteenth century Hungary: Evidence from the Hungarian MOSAIC sample*. Working Papers on Population, Family and Welfare, No. 20. Budapest: Demographic Research Institute.

Őri, P., & Pakot, L. (2016). *Leaving the parental household (timing and determinants). Evidence from the Hungarian Mosaic sample*. Paper presented at the ESSHC Conference, Valencia.

Örsi, J. (1983). Endogámia és exogámia Magyarországon a XVIII–XX. században [Endogamy and exogamy in Hungary in the eighteenth to the twentieth centuries]. *Demográfia, 26*, 572–597.

Pélissier, J-P., Rébaudo., D., van Leeuwen, M. H. D., & Maas, I. (2005). Migration and endogamy according to social class: France, 1803–1986. *International Review of Social History, 50*, 219–246.

Romsics, I. (1999). *Magyarország a XX. században* [Hungary in the twentieth century]. Budapest: Corvina.

Schwartz, C. R. (2013). Trends and variation in assortative mating: Causes and consequences. *Annual Review of Sociology, 39*, 451–470.

Segalen, M. (1983). *Love and power in the peasant family: Rural France in the nineteenth century*. Oxford: Basil Blackwell.

Shorter, E. (1975). *The making of the modern family*. New York, NY: Basic Books.

Simkus, A., & Andorka, R. (1982). Inequalities in educational attainment in Hungary, 1923-1973. *American Sociological Review, 47*, 740–751.

Simmel, G. (1955). *Conflict and the web of group affiliations*. New York, NY: Free Press.

Smith, J. A., McPherson, M., & Smith-Lovin, L. (2014). Social distance in the United States: Sex, race, religion, age, and education homophily among confidants, 1985 to 2004. *American Sociological Review, 79*, 432–456.

Smits, J. (2003). Social closure among the higher educated: Trends in educational homogamy in 55 countries. *Social Science Research, 32*, 251–277.

Smits, J., Ultee, W., & Lammers, J. (1998). Educational homogamy in 65 countries: An explanation of differences in openness using country-level explanatory variables. *American Sociological Review, 63*, 264–285.

Tomka, B. (2013). *A social history of twentieth-century Europe*. London: Routledge.

Treiman, D. J. (1970). Industrialization and social stratification. In E. O. Lauman (Ed.), *Social stratification: Research and theory for the 1970s* (pp. 207–234). Indianapolis, IN: Bobbs-Merrill.

Uunk, W. J. G., Ganzeboom, H. B. G., & Róbert, P. (1996). Bivariate and multivariate scaled association models. An application to homogamy of social origin and education in Hungary between 1930 and 1979. *Quality and Quantity, 30*, 323–343.

Van de Putte, B., Oris, M., Neven, M., & Matthijs, K. (2005). Migration, occupational identity, and societal openness in Nineteenth-Century Belgium. *International Review of Social History, 50*, 179–218.

van Leeuwen, M. H. D., & Maas, I. (2002). Partner choice and homogamy in the nineteenth century: Was there a sexual revolution in Europe? *Journal of Social History, 36*, 101–123.

van Leeuwen, M. H. D., & Maas, I. (2005). Endogamy and social class in history. *International Review of Social History, 50*, 1–23.

van Leeuwen, M. H. D., & Maas, I. (2010). Historical studies of social mobility and stratification. *Annual Review of Sociology, 36*, 429–451.

van Leeuwen, M. H. D., Maas, I., & Miles, A. (2002). *HISCO: Historical international standard classification of occupations*. Leuven: Leuven University Press.

Vital Statistics. (1900–1912. 1.) *A Magyar Korona országainak 1900., 1901. és 1902. évi népmozgalma* [Population movements in the countries of the Hungarian Crown, 1900, 1901, 1902]. Budapest, 1905. 2.) A Magyar Szent Korona országainak 1903., 1904. és 1905. évi népmozgalma [Population movements in the countries of the Hungarian Crown, 1903, 1904, 1905]. Budapest: MKKSH, 1907. 3.) A Magyar Szent Korona országainak 1909., 1910., 1911. és 1912. évi népmozgalma [Population movements in the countries of the Hungarian Crown, 1909, 1910, 1911, 1912]. Budapest, 1918.

Vital Statistics. (1919–1932. 1.) *Az 1919–1925. évi népmozgalom* [Population movements, 1919–1925]. Budapest, 1929. 2.) Az 1926–1932. évi népmozgalom [Population movements, 1926–1932]. Budapest: MKKSH, 1937.

Vukovich, G. (1962). A három alapvető társadalmi réteg házassági mobilitása [Marriage mobility of the three basic social strata]. *Demográfia, 5*, 288–314.

Whelan, C. T., & Layte, R. (2002). Late industrialization and the increased merit selection hypothesis. Ireland as a test case. *European Sociological Review, 18*, 35–50.

Zijdeman, R., & Maas, I. (2010). Assortative mating by occupational status during early industrialization. *Research in Social Stratification and Mobility, 28*, 395–415.