At the dawn of the modern society, the influence of the extended family weakened, while the influence of young people as individuals strengthened. Ever since, it has been individuals who make the choice of a spouse. Emotions, mutual affection, and romantic love have become established reasons for entering into marriage (Shorter 1975; Laslett 1977; Flandrin 1979, 1991). As a consequence, the institution of the affective relationship has evolved. Young people meet each other and share emotions, wishes, and desires – in short, they share a greater or lesser degree a close relationship that precedes marriage and family formation. It is paradoxical that, in the end, partners selected on the basis of personal affection and emotions in most respects do not differ from those that parents following the traditional guidelines might have chosen for their children anyway (Laslett 1977; Flandrin 1991). Even in modern societies, people do not select just any partner but a partner who is similar to them in status, as well as in economic, educational, religious, ethnic, and regional terms. Thus, although the method of negotiating marriages changed at the dawn of the modern society, the final shape of marriages has not changed significantly. Marriage and family continue to form the foundation on which lies the survival of the social structure from one generation to the next (Shorter 1975; Flandrin 1979).

Marriage between partners with similar backgrounds is termed “homogamy”. Once sociologists and demographers (Hunt 1940; Burgess – Wallin 1943; Winch 1958; Girard 1964) had identified homogamy as a part of the social structure of the modern society – first by observing patterns of homogamy and somewhat later by identifying it as a common reason for the selection of a certain partner – the phenomenon became a focus of much research. This interest was strengthened by the observance that a society’s degree of homogamy not only reflects its mating patterns but also indicates the “societal openness” (Ultee – Luijkx, 1994; Smits – Ultee – Lammers, 1998a; 1998b). For example, high educational homogamy indicates that people perceive significant gaps between individual educational levels, and this in turn is reflected in their marital behaviour. Likewise, low religious homogamy indicates that people see small differences between members of religious and non-religious groups, and this also is reflected in their marital preferences.

This paper analyzes educational homogamy in the Czech Republic, Slovakia and Hungary in the last quarter of the 20th century and considers its development between 1976 and 2003. The paper aims to demonstrate the degree to which the Czech Republic, Slovakia and Hungary are similar in terms of educational homogamy and explore whether the political, social, economic and cultural transformation that began in 1989 in all the three analyzed countries had the same impact on the development of educational homogamy in each of them.

Identifying the rule of homogamy
For a long time, social scientists did not question the incompatibility of romantic love and rational calculation in partner selection. However, at the end of the first half of the 20th century, the first research and analyses that identified the rule of homogamy appeared (Hunt 1940; Burgess – Wallin 1943; Winch 1958; Girard 1964). This rule shocked not only professionals but also to a large degree the lay public, and it became the basis of a new approach to studying modern society. According to the rule of homogamy, the majority of young people do not select

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partners by chance, but on the basis of social similarity. Economically, socially, or culturally disadvantaged people select their partners from among the economically, socially or culturally disadvantaged; likewise, people of higher social status choose partners among those with good social standing. Young people select young partners; old people select old ones; believers select believers; the disabled or physically handicapped tend to partner with disabled or physically handicapped people (Girard 1964). In short, partner selection is not an equal opportunity process, though it may appear so to the individual, and is presented as such in public and in mass media. The choice of a partner is structured by social criteria that define the likelihood of meeting and pursuing a relationship with a given individual. Love that transcends these social barriers seems to exist only in fairy tales.

In response to the first research on marital homogamy, numerous similar studies have been conducted from a variety of perspectives and on various populations in the second half of 20th century (e.g. Ultee – Luijkx 1994; Kalmijn 1991a, 1991b; Mare 1991; Smits – Ultee – Lammers, 1998a, 1998b, 2000). As findings accumulated, knowledge of homogamy developed and matured until the number of criteria that determined homogamy became consistent. Today we know that it is above all age and geographical proximity, ethnicity, religion, education, and social status that structure the choice of a partner. Relationships are most often formed by people who are roughly of the same age, do not live too far away from each other, belong to the same ethnic group, are of a similar religious belief, and have the same education and similar social status. This has led social scientists to adopt the metaphor of a “marriage market”, which denotes the space, defined by certain rules, that influences choice.

Measurement and analysis of homogamous marriages

As with social mobility, marital homogamy refers to social barriers that exist among individual social strata and groups. High social mobility indicates high heterogamy and low homogamy: the social structure is open because people overcome social differences relatively easily. Low social mobility goes hand in hand with low heterogamy and high homogamy: the social structure is closed, as social barriers at the level of everyday practice are more difficult to overcome.

Because of this correlation between mobility and homogamy, social scientists in the second half of the 20th century primarily measure intergenerational and geographical variation in marital homogamy as a supplement to stratification research. The growth in works that compare degrees of marital homogamy over time within one country corresponds with the developments in logarithmic-linear modelling from the mid-1970s, which constitute the prevalent statistical apparatus used in these analyses. In the United States, homogamy determined by education, job, and age has been analyzed e.g. by Rockwell (1976), Kalmijn (1991a), Mare (1991), Qian – Preston (1993), Kalmijn (1994), and Qian (1998). Sixma – Ultee (1984) and Poppel – LiebRoer – Vermunt – SmeeNk (2001) conducted similar analyses in the Netherlands; in Hungary, Uunk – Harry – Ganzeboom – Róbert (1996) and Bukodi (2001) mapped the development of educational homogamy. Lancaster (1987) conducted the same analysis in Australia. Homogamy defined by religious belief and education was intergenerationally analyzed in the United States by Johnson (1980) and Kalmijn (1991b); Kalmijn (1993), Qian (1997, 1999), Fu (2001), Rosenfeld (2002) and Sherkat (2002) analyzed homogamy based on ethnicity, age and education. The goal of these works was to depict a trend in the development of homogamy and thus determine whether the social structures of the individual societies in their respective studies were opening or closing.

Works that measure and compare the levels of homogamy between countries emerged at the beginning of the 1990s. Ultee and Luijkx (1994) and Smits, Ultee and Lammers (1998a) in their extensive comparisons of homogamy (Ultee and Luijkx compared 23 countries; Smits, Ultee and Lammers as many as 65) worked with data collected at one or two points in time, and were less concerned with intergenerational trends within individual countries. Their aim was to identify groups of countries that were similar with respect to homogamy. Other works that either built upon these comparative projects or criticized them measured homogamy on a significantly smaller sample of countries, but balanced this by introducing another dimension: intergenerational change in homogamy within each country (Boguszak 1990; Smits – Ultee – Lammers 1998b; Raymo – Xie 2000; Smits – Lammers – Ultee 2000; Park 2001). These works integrate two types of previous analyses. They compare homogamy over time within one country to determine an intergenerational trajectory. They also compare this trajectory with those in other countries. The aim is to identify differences among countries with respect to their intergenerational homogamy trends.

Educational homogamy in the Czech Republic, Slovakia and Hungary

Educational homogamy itself was not researched in the Czech Republic, Slovakia or Hungary yet. Before November 1989, Czechoslovak and Hungarian societies were studied only as part of some comparative research projects on educational homogamy.

Ultee and Luijkx (1994) included the Czech Republic and Hungary in their analysis of educational homogamy when they tested the hypothesis of socialism’s
positive influence on relative mobility opportunities. They found that the effects of socialism on partners’ educational heterogamy were the opposite of what they had expected: state socialism had acted against an increase in educational heterogamy.

Boguszak (1990) arrived at the same conclusion when comparing relative homogamy in the Netherlands, Czechoslovakia, and Hungary. His analysis showed that the relative chances of an educationally heterogamous marriage were lower in socialist countries than in the Netherlands. The socialist ideology of egalitarianism, in combination with state measures that pre-1989 governments had implemented to homogenize the society, equalize opportunities, and democratize, did not reach the level of everyday practice and did not influence the selection of a husband or wife according to education. They thus did not lead to an increase in educational heterogamy.

In the second half of the 1990s, Smits – Ultee – Lammers (1998a) continued working with Czechoslovak and Hungarian data from 1980. Their analysis showed that the rate of educational homogamy was economically, politically, and religiously determined. Among the European countries studied, Czechoslovakia belonged to the group with the lowest educational homogamy and Hungary belonged to the group with the highest educational homogamy.

Before the 1990s educational homogamy was not measured in a comparative framework in the Czech Republic, Slovakia and Hungary. It remains a question how educational homogamy developed following 1989 in these post-socialist countries. Can we expect – at a time of economic and social changes – the same trend in educational homogamy in all these countries? And how did educational homogamy develop before 1989 in these countries? These are core questions in respect of the following analysis.

Data and absolute educational homogamy
In order to map the development of educational homogamy in the Czech, Slovak and Hungarian societies I analyzed all the marriages entered into by men’s and women’s education (elementary, vocational training, high school and tertiary) in the years 1976 to 2003. In aggregated form the data consist of three three-way tables (or one four-way table), which I arranged by countries and over years of entry into marriage in ten two-way sub-tables, which indicate the number of marriages by men’s and women’s education in the individual countries and years (c.f. Appendix, Tables 2-4).

Figure 1 shows the sum of total (joint) frequencies on the main diagonals in each sub-table, above and under them by country and over years. Educationally homogamous marriages make up more than half of all marriages entered into in the selected countries (apart from the years 1976 to 1991 in Hungary). In the remaining less than half of marriages in all the countries those marriages dominate in which the woman has lower education than the man (man’s hypogamy and woman’s hypergamy) over marriages in which the woman has higher education than the man (man’s hypergamy and woman’s hypogamy). However, in the course of the 1980s and above all the 1990s the ratio changes: in the Czech Republic, Slovakia as well as in Hungary among the educationally heterogamous marriages those in which the woman had higher education than the man (man’s hypergamy and woman’s hypogamy) began to dominate over those in which the woman had lower education than the man (man’s hypogamy and woman’s hypergamy).

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4 In the case of Hungary the development of educational homogamy was explored by Bukodi (2002) in the first half of the 1990s.
6 The data were processed by national statistical offices. The marginal row in each this two-way sub-table shows the educational structure of men entering into marriage and the marginal column shows the educational structure of women entering into marriage in the given year and country. The main diagonal represents educationally homogamous marriages. The figures above the main diagonal indicate marriages in which the woman attained a higher education than the man (the woman marries a man with lower education, from her viewpoint it is a hypogamous marriage, the man marries a woman with higher education, from his viewpoint it is a hypergamous marriage). The figures below the main diagonal represent marriages in which the man attained a higher education than the woman (from his viewpoint it is a hypogamous marriage as he marries a woman with lower education, from the woman's viewpoint it is a hypergamous marriage as she marries a man with higher education). The greater the distance of each number in each table from the main diagonal in the direction of the woman’s or the man’s higher education, the greater the educational disproportion between the spouses.
Figure 2 demonstrates the development of individual types of educationally homogamous marriages by country. In all the countries educational homogamy among men and women with elementary education (man-EL+woman-EL) has been on the decrease since 1976. In all the countries in the 1990s this decrease is accompanied by a decrease in educational homogamy among men and women with vocational training (man-VT+woman-VT). In contrast, between 1976 and 2003 educational homogamy among men and women with high school (man-HS+woman-HS) as well as university education (man-TE+woman-TE) increased. In individual countries in 2003 the highest share of homogamous marriages involved those between men and women with high school education (significantly higher in the case of Slovakia than the Czech Republic or Hungary) and with vocational and university education.

Figures 3 and 4 demonstrate the development of the individual types of educationally heterogamous marriages by countries. Figure 3 shows the development of all marriages that belong into the group of marriages in which the woman has higher education than the man (man’s hypogamy and woman’s hypergamy). Figure 4 demonstrates specifically the development of all marriages in which the woman has higher education than the man (man’s hypergamy and woman’s hypogamy). Figure 3 demonstrates a decrease in man’s hypogamy and woman’s hypergamy between the years 1976 and 2003 (c.f. Figure 1) which is caused mainly by a fall in marriages between men with vocational training and women with elementary education (man-VT+woman-EL) in all the three selected countries (this decrease is most extreme in Hungary). In contrast, Figure 4 shows that the increase in men’s hypergamy and women’s hypogamy during the same period (again c.f. Figure 1) is caused above all by an increase in marriages between men with vocational training and women with high school education (man-VT+woman-HS) as well as by a growth in marriages, in particular between 1994 and 2003, between men with high school education and women with tertiary education (man-HS+woman-TE).

Figure 5 shows the transformation of the educational structure of men and women who entered into marriages in the individual countries. This transformation is similar in all the countries. Since 1976 we can see, on the one
hand, a decrease of the proportion of marriages entered into by men with elementary education (man-EL) and women with elementary education (woman-EL). Since the beginning of the 1990s the proportion of marriages entered into by men with vocational training (man-VT) and women with vocational training (woman-VT) decreased as well. In contrast, in all the countries the proportion of marriages entered into by individuals with high school and tertiary education increased.

These changes can be explained by changes in the educational structure (in the period under study and in particular in the 1990s in all the selected countries the proportion of people with elementary education and vocational training was on the decrease while, in contrast, the proportion of people with high school and tertiary education was on the increase) and these changes can also be equally understood as a cause of the decrease in the number of marriages in which the man had higher education than the woman and, on the contrary, the increase in the number of marriages in which the woman had higher education than the man. When the number of men with vocational training and women with elementary education decreases in a population, the number of their marriages also decreases. Due to the fact that in 1976 this type of marriages dominated among heterogamous marriages (in these the man has higher education than the woman), yet in the 1980s and 1990s it decreased rapidly, the share of man’s hypogamy and woman’s hypergamy (c.f. Figure 1) decreased as well. On the contrary if the proportion of people with high school and tertiary education increases in a population, there is also an increase in the number of marriages that they enter into with each other. And due to the fact that since 1976 the number of women with high school education entering into marriage was on the increase in all the selected countries (in the 1990s also the proportion of women with tertiary education entering into marriage increased) also the proportion of marriages in which the woman has higher education than the man grew (again c.f. Figure 1).
**Relative educational homogamy and statistical modelling of its trend**

Educationally homogamous and heterogamous marriages are to some extent structurally determined by the gendered distribution of education in all three countries. For instance we have seen (c.f Figure 3) that a typical structurally forced marriage can be expected between a man with vocational training and a woman with high school education in all countries. The proportion of men with vocational training entering into marriage is about 10% higher than the proportion of women with the same level of schooling entering into marriage in each country (c.f. Figure 4). Similarly, the proportion of women with high school education entering into marriage is on average 10% higher than the proportion of men with high school education entering into marriage in each country (again c.f. Figure 4). Because the disparities in educational attainment between men and women entering into marriage change somewhat over time, I analyze the data about marriages using log-linear and log-multiplicative analyses that study the associations in frequency tables net of marginal distributions. The results then do not describe absolute homogamy but relative homogamy which gives a more accurate account of the intentions, motivations, and the conduct of people entering into marriage (for more on these analyses c.f. Hout 1983; Yamaguchi 1987; Xie 1992; Goodman – Hout 1998, 2001; Powers – Xie 2000).

I study the association between wife's and husband's education by country and over years. The equation of the saturated model is as follows:

\[
\log(F_{ijkl}^{MWYC}) = \lambda + \lambda_M^i + \lambda_W^j + \lambda_Y^k + \lambda_C^l + \lambda_{MW}^{ijkl} + \lambda_{MY}^{ijkl} + \lambda_{MC}^{ijkl} + \lambda_{WC}^{ijkl} + \lambda_{YC}^{ijkl} + \lambda_{MWWY}^{ijkl} + \lambda_{MWMY}^{ijkl} + \lambda_{YMWC}^{ijkl} + \lambda_{YMWC}^{ijkl} + \lambda_{MYCY}^{ijkl},
\]

where \(\log(F_{ijkl}^{MWYC})\) is the natural logarithm of the expected frequency for row \(i\) (\(M\)-men's educational level), column \(j\) (\(W\)-women's educational level), layer \(k\) (\(Y\)-years) and dimension \(l\) (\(C\)-country) in the four-way table; \(\lambda\) (lambda) are parameters, while \(\lambda\) is the main mean, \(\lambda_M^i, \lambda_W^j, \lambda_Y^k, \lambda_C^l\) are the marginal effects of the variables \(M, W, Y\) and \(C\), \(\lambda_{MW}^{ijkl}, \lambda_{MY}^{ijkl}, \lambda_{MC}^{ijkl}, \lambda_{WC}^{ijkl}, \lambda_{YC}^{ijkl}\) are two-way interactions among variables \(M, W, Y\) and \(C\), and \(\lambda_{MWYC}^{ijkl}\) denotes the four-way interaction among variables \(M, W, A, Y\) and \(C\). Since I was interested in the development of the association between men's and women's educational level over year of entry into marriage and by country, I concentrated on the modeling of the two-way \(MW\) association and all higher order interactions between the \(MW\) association and other variables (\(\lambda_{MW}^{ijkl}, \lambda_{MY}^{ijkl}, \lambda_{MC}^{ijkl}, \lambda_{WC}^{ijkl}, \lambda_{YC}^{ijkl}\)). First I estimated the null association model, which is usually used as a baseline model (\(\lambda_{MW}^{ijkl} = \lambda_{MY}^{ijkl} = \lambda_{MC}^{ijkl} = \lambda_{WC}^{ijkl} = \lambda_{YC}^{ijkl} = 0\)). Then, I estimated the constant association model, where the \(MW\) association is constant over \(Y\) and by \(C\) (\(\lambda_{MW}^{ijkl} = \lambda_{MY}^{ijkl} = \lambda_{MC}^{ijkl} = \lambda_{WC}^{ijkl} = 0\)), and the constant association model with blocked main diagonal in each \(M \times W\) sub-table.\(^8\) Furthermore, I modeled the \(MW\) association as additive uniform and as log-multiplicative uniform.

The additive uniform layer effect model (Yamaguchi, 1987) means that the \(MW\) association is estimated as constant in all sub-tables and its higher order

\(^8\) It is a standard practice to block the main diagonal in tables of marriage pairs, mobility tables, and other frequency tables of this type. The cells on the main diagonal are usually very high relative to the off-diagonal cells. This strong "inheritance effect" usually overrides any other pattern in the data and drives model selection and specification efforts, which is usually undesirable because other, more subtle patterns and associations remain hidden.
interactions are modeled on the assumption of a specific order of rows and columns in the sub-tables as a sum of this two-way association and an estimated parameter $\beta$, which indicates the change in the strength of $MW$ association over $Y$ and by $C (\lambda_{ij} + \lambda_{ik} + \lambda_{jl} + i j \beta_{ij})$.

The log-multiplicative uniform layer effect model (Xie, 1992) is constructed on a similar principle as the additive uniform layer effect model. A two-way association of $MW$ is estimated as constant for all sub-tables, and its higher order interactions are modeled as a product of this two-way interaction and an estimated parameter $\varphi$, which shows the changes in the strength of the two-way interaction over $Y$ and by $C (\lambda_{ij} + \lambda_{ik} + \lambda_{jl} + \lambda_{ijkl} = \psi j \varphi_{kl})$. The advantage of the log-multiplicative model is that it does not presuppose an ordering of rows and columns in the tables and is more intuitive to interpret. In this model it is also possible to make additional constraints to estimate more parsimonious model which fits the data more accurately, than in the case of additive uniform layer effect model.

**Findings about relative educational homogamy**

Before the estimation of the log-linear and log-multiplicative models, I standardized the overall $n$ in each two-way sub-table of marriages by man's and woman’s educational levels to 25,000 marriages by random sampling. For each country I thus gained a sample of marriages of the size of 250,000 and the overall number of marriages ($N$) for all the three countries was 750,000 marriages. I employed standardization of the table size in order to make individual sub-tables comparable and to avoid a bias in the model selection process due to different $n$ in each sub-table (Ultee and Luijkhx, 1994; Smits, Ultee and Lamers, 1998a; Raymo and Xie, 2000).

For all data the goodness-of-fit statistics of estimated models are presented in Table 1. Model 1 is the null association model. This model fits the data very poorly – it has positive BIC (Raftery, 1986, 1995), it misclassified more than 25% of all marriages and it has $L^2$ of 330 510 with 270 degrees of freedom. Model 2 is the constant association model and Model 3 is the constant association model with heterogeneously blocked main diagonal in each sub-table. Both models fit the data significantly better then the null association model. Moreover, Model 3 is statistically superior to Model 2 ($L^2$ for the contrast is 5 144 with 116 degrees of freedom, which is a very significant difference). All subsequent models are therefore estimated with heterogeneously blocked main diagonals. Both Model 4 (additive uniform effect) and Model 5 (log-multiplicative uniform effect) are conceptually good tests of trend in association between man’s and woman’s education level in marriage market and both models fit the data satisfactorily. The estimated trend parameters from both of these models have showed that the trend in educational homogamy could be quadratic over years and by country. To get a more parsimonious model I made restrictions on phi parameters in model 6. The first parameter for year 1976 was constrained to be estimated the same as the last parameter for year 2003. The second parameter for year 1979 was constrained to be estimated the same as the second parameter from the end of time period (thus for year 2000), and so on. By this model I saved 15 degrees of freedom. According to classical statistics the fit of the model is not substantively poor and according to BIC criterion this model fits the data more satisfactory than previous two models. In the last model (7) I modelled the trend in educational homogamy to be quadratic between 1976 and 2003 in each country. This model is more parsimonious that previous model and it fits the data according both the classical statistics and BIC criterion. I interpret the data on the basis of the parameters of this last model, although the substantive conclusions are fairly insensitive to the details of concrete model specification and would not change if we used model 4, 5, 6 or 7 instead.

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9 The procedure of random sampling from aggregated data was the following: In the first phase I transformed aggregated data to individual. Then I conducted random sampling taking into account the classification of frequencies according to man’s and woman’s education in individual countries to be the overall $n$ in each two-dimensional table 25,000. In the next phase I transformed this data set back to aggregated data. The comparison of joint percentual distributions of the original data and sampled data proved satisfactory: the differences in any field of a contingency sub-table were not bigger than 2%.

10 When searching for the (natural logarithm) peak of the log-likelihood function (and thus the adequate parameter) with lowering the overall $N$ it is more likely that we can avoid local maximums of the log-likelihood function and thus inadequate estimations of parameters (Vermunt 1997).
Table 1. Goodness-of-fit statistics of models applied to data on educational assortative mating in the Czech Republic, Slovakia and Hungary between 1976 and 2003.

<table>
<thead>
<tr>
<th>Model</th>
<th>Description of the model</th>
<th>df</th>
<th>$L^2$</th>
<th>$\Delta$</th>
<th>BIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) CYM CYW</td>
<td>Null association</td>
<td>270</td>
<td>330 509.7</td>
<td>25.64</td>
<td>326 857</td>
</tr>
<tr>
<td>2) CYM CYW MW</td>
<td>Constant association</td>
<td>261</td>
<td>5 862.5</td>
<td>2.85</td>
<td>2 332</td>
</tr>
<tr>
<td>3) CYM CYW MW D</td>
<td>Constant association, blocked diagonals</td>
<td>145</td>
<td>718.7</td>
<td>0.52</td>
<td>-1 243</td>
</tr>
<tr>
<td>4) CYM CYW (MW), D</td>
<td>Additive uniform layer effect, blocked diagonals</td>
<td>116</td>
<td>366.3</td>
<td>0.37</td>
<td>-1 202</td>
</tr>
<tr>
<td>5) CYM CYW (MW), D</td>
<td>Log-multiplicative uniform layer effect, blocked diagonals</td>
<td>116</td>
<td>387.0</td>
<td>0.37</td>
<td>-1 182</td>
</tr>
<tr>
<td>6) model 5, $\phi$ constrained</td>
<td>Log-multiplicative uniform layer effect, blocked diagonals, $\phi$ quadratic trend</td>
<td>131</td>
<td>421.9</td>
<td>0.40</td>
<td>-1 350</td>
</tr>
<tr>
<td>7) model 5, $\phi$ quadratic</td>
<td>Log-multiplicative uniform layer effect, blocked diagonals, $\phi$ quadratic trend</td>
<td>137</td>
<td>416.0</td>
<td>0.39</td>
<td>-1 437</td>
</tr>
</tbody>
</table>

Note: C – country; Y – year; M – men’s educational level; W – women’s educational level; D – blocked main diagonals; subscript u – additive uniform layer effect among tables; subscript x – multiplicative uniform layer effect among tables; $L^2$ is the log-likelihood ratio chi-square statistic; df are the degrees of freedom; BIC is Bayesian information criterion ($BIC = L^2 - (df) \log(N)$), where $N$ is the total number of cases (750 000); $\Delta$ is the index of dissimilarity, which indicates the proportion of cases misclassified by the model.

Figure 6 shows the estimated parameters of models 5, 6 and 7 over years and by countries. The parameters from individual models can be compared in individual countries vertically as well as horizontally. A vertical comparison of the parameters of individual models shows that we find the highest degree of educational homogamy in Slovakia, a somewhat lower one in Hungary and the lowest educational homogamy can be found in the Czech Republic. For a horizontal comparison I used the quadratic fit for the estimated parameters of Models 5 and 6. On this basis it is possible to conclude that in each country the development of educational homogamy is quadratic in time. Model 7 tests the quadratic trend and supports this finding. As we have seen it fits the data the most satisfactorily. In all the selected countries educational homogamy is the highest at the beginning of the period under study (in 1976), in the Czech Republic and Slovakia it weakens by about 20% in the course of the 1980s, in the first half of the 1990s the trend reverses and in the second half of the 1990s educational homogamy increases again although in 2003 it does not reach the original values from 1976. In Hungary the trend is very similar, the decrease in educational homogamy in the 1980s, however, is not so marked and its increase in the 1990s is very gradual.

Based on the data it can be concluded that in all the selected post-socialist countries the 1990s represent an interruption in the trend of weakening educational homogamy which is detectable from the second half of the 1970s until the end of the 1980s. In the 1990s educational homogamy again increases rapidly (in the cases of the Czech Republic and Slovakia) or gradually (in the case of Hungary).

Conclusions
This paper dealt with educational homogamy over years within the last quarter of the 20th century in the Czech Republic, Slovakia and Hungary. All the marriages entered into in these countries between 1976 and 2003 (in three-year periods) were analyzed and the temporal and spatial variations of educational homogamy were explored. The major aim of the paper was to answer the question on how educational homogamy developed in post-socialist countries before 1989 as well as following it and how individual post-socialist countries differ among themselves on the basis of these developments.
In terms of spatial variation both in 1976 and in 2003 relative educational homogamy was the lowest in the Czech Republic, it was somewhat higher in Hungary and the highest in Slovakia. In terms of temporal variation in all the three countries we can observe the same development which has the shape of “U”. From 1976 to the beginning of the 1990s educational homogamy was on the decrease, during the first half of the 1990s it reached its minimum and from the second half of the 1990s it strengthened either rapidly (in the Czech Republic and Slovakia) or only gradually (in the case of Hungary). In all the countries under study the development of educational homogamy also involved the transformation of the pattern of educational assortative mating which, however, is not the same in all the countries.

If we agree that shifts in relative educational homogamy indicate societal openness, as Ultee, Luijkx (1994) or Smits, Ultee, Lammers (1998a; 1998b)\textsuperscript{14} demonstrate, we can conclude that the volume of social inequalities in all the societies under study returns to a state in which they were in the mid-1970s. Although Czech society is the most open one (the most egalitarian) out of the countries under study and the Slovak society is, in contrast, the most closed one (the least egalitarian), the development of the volume of societal openness indicated by educational homogamy is in all the three societies similar. Socialism between 1976 and 1989 brought with itself the weakening of social inequalities because educational homogamy weakened, nonetheless, the transformation from socialism to capitalism brings a change in this trend: social and economic inequalities are on the increase in these societies because educational homogamy among individuals in the marriage market is on the increase.

This conclusion is in line with findings from most recent mobility research (Gerber – Hout 2005; Pollak – Müller 2002) which targeted the transformation of the class structure in the 1990s in the countries of the former socialist bloc. Gerber and Hout (2002) researched intergenerational social mobility in the Russian society between 1988 and 2000 and showed that its class structure is being closed. Pollak and Müller (2002) also arrived at the same conclusion when comparing the development of intergenerational mobility in the western and eastern parts of Germany. Although class structure in the eastern part of Germany was at the beginning as well as the end of the 1990s more open than the class structure in the western part of Germany, in both part of Germany social fluidity weakened in the 1990s and the class structure of both societies is closing.

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REFERENCES


\textsuperscript{14} Low homogamy goes hand in hand with high social mobility, in such a case we talk about societal openness because people relatively easily overcome social and economic differences. High homogamy is linked with low social mobility, in this case societal closure is involved, socio-economic barriers at the level of everyday conduct are too big to be overcome without great difficulty.


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Appendix

Table 2. Frequency distribution of all new marriages by education of spouses between 1976 and 2003 in the Czech Republic.

<table>
<thead>
<tr>
<th>Year</th>
<th>Men’s education level</th>
<th>Women’s educational level</th>
</tr>
</thead>
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<td>VC</td>
</tr>
<tr>
<td>------</td>
<td>----</td>
<td>----</td>
</tr>
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<td>1976</td>
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</tr>
<tr>
<td></td>
<td>VT</td>
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<td>Total</td>
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<tr>
<td></td>
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<td>TE</td>
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</tr>
<tr>
<td></td>
<td>Total</td>
<td>24864</td>
</tr>
<tr>
<td>1978</td>
<td>EL</td>
<td>11784</td>
</tr>
<tr>
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<tr>
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<td>TE</td>
<td>311</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>24864</td>
</tr>
</tbody>
</table>

Note: EL – elementary school, VT – vocational training, HS – high school, TE – tertiary education.
Source: Czech Statistical Office.
### Table 3. Frequency distribution of all new marriages by education of spouses between 1976 and 2003 in Slovakia.

<table>
<thead>
<tr>
<th>Year</th>
<th>Men's ed. level</th>
<th>Women's educational level</th>
<th>Year</th>
<th>Men's ed. level</th>
<th>Women's educational level</th>
</tr>
</thead>
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<td>Total 14655</td>
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<td>14492</td>
<td>2025</td>
<td>44160</td>
</tr>
</tbody>
</table>

#### Note:
- EL – elementary school, VT – vocational training, HS – high school, TE – tertiary education.
- Source: Slovak Statistical Office.

### Table 4. Frequency distribution of all new marriages by education of spouses between 1976 and 2003 in Hungary.

<table>
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<tr>
<th>Year</th>
<th>Men's ed. level</th>
<th>Women's educational level</th>
<th>Year</th>
<th>Men's ed. level</th>
<th>Women's educational level</th>
</tr>
</thead>
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<td>31073</td>
<td>5959</td>
<td>100466</td>
</tr>
</tbody>
</table>

#### Note:
- EL – elementary school, VT – vocational training, HS – high school, TE – tertiary education.
- Source: Hungarian Statistical Office.