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Access to education in six Eastern European countries between 1940 and 1985. Results of a cross-national survey

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Abstract

This paper presents an analysis of patterns of access to education in six Eastern European countries (Bulgaria, Czech Republic, Hungary, Poland, Russia, and Slovakia) between 1940 and 1985. As in other industrial countries, average educational attainment (measured by duration, i.e. years in school) has increased greatly since 1940. But the expansion was most rapid until 1970. In all six countries, women increased their educational attainment more than men. By 1975, the difference between men and women in regard to years of schooling had virtually disappeared in all countries studied. Parents' educational attainment (measured as average years of schooling of father and mother) proves to be a main determinant of their children's attainment. However, the effect of parents' education decreased by about half from 1940 to 1985. Cultural resources (measured by parents' cultural behavior while the respondent was growing up) turns out to be a strong predictor of educational attainment, and equally so for men and women. It accounts for about one-third of the educational reproduction effect. However, the effect of cultural background declined considerably under communism. Finally, parents' political resources (measured as parents membership of the Communist Party) is shown to have a weak but consistent effect on educational attainment in the six countries. Although

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this effect was relatively strong in the early communist period, it was negligible for the younger cohorts. © 1999 The Regents of the University of California. Published by Elsevier Science Ltd. All rights reserved.

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Introduction

The demise of state socialism in Eastern Europe in 1989 marks the end of what can be regarded as one of the largest-scale destratification experiments in the history of the human race. In this experiment, one of the explicit aims of the former communist regimes was to reverse the major forms of social stratification and forcefully impose an equalized distribution of societal rewards. To this end, the communist regimes abolished private ownership of means of production and prevented the accumulation of material and financial capital in private hands. The government instituted negative discrimination of traditionally privileged social groups (bourgeois), positive discrimination of traditionally underprivileged social groups (in particular manual workers), and strict control of migration, both within and between countries.

In addition to directly influencing the distribution of scarce goods in society, Marxist policy-makers — unlike Marxist sociologists (Wright, 1985) — have taken into account that the allocation of scarce goods does not stop at the accumulation of goods within a single generation. It also involves the transmission of goods between consecutive generations. Marxist policy-makers have shown an astute awareness of the fact that the family is the basic unit of social stratification. Accordingly, they knew that the transmission of societal (dis)advantages between generations, e.g. from parents to their children, plays a major role in shaping the distribution of goods and opportunities. For that reason, socialist policy-makers placed the task of influencing patterns of social mobility and social reproduction high on their agenda. Specifically, influencing the intergenerational transfer of resources within families was a main target of their destratification policies. The abolition of large-scale private ownership and the right to inherit several forms of private goods are telling examples.

The efforts to reduce social reproduction went beyond policies on the transfer of private property and other material resources. Policies were also introduced to influence educational selection processes. It was well understood that in modern societies, education serves as an important means of transferring social inequality between generations. State socialist countries therefore actively increased the educational opportunities for children of people in lower social positions and decreased these opportunities for children of people in high positions. At some point, all communist countries took measures to enhance the educational opportunities of the offspring of manual and farm workers and to actively discriminate against the educational advancement of others, in particular the children of (formerly) bourgeois classes. The policies adopted went far beyond the usual practices of stimulation and “head start” programs common in Western societies since the 1960s. In particular, active

individual discrimination was used to select students for admission to secondary and tertiary education (or keep them out). It would seem that these policies have to a large extent shaped the educational destinies of the populations of Eastern Europe.

The first aim of this study is to assess the level of intergenerational educational reproduction in six Eastern European countries (Bulgaria, Czech Republic, Hungary, Poland, Russia and Slovakia) during the communist era. We therefore examine the extent to which the educational attainment of children is related to their parents' education. A second aim of this paper is to assess the extent to which cultural characteristics and the political status of parents mediate this relation, giving attention to the developments over time on the effects of these characteristics. This paper improves on earlier work by investigating data from a large-scale survey containing information on relevant characteristics of respondents and their parents in an internationally comparable format.

Theoretical background and earlier research

It is generally assumed that a person's social background has a substantial influence on his or her educational career. In all industrialized countries, children from the lower social classes are less successful in their educational career than children from the higher classes (Shavit and Blossfeld, 1993). From their start, Marxist regimes have tried to create a more egalitarian society. Being aware of the processes of educational reproduction, they have sought to minimize the strength of the relation between education and social background. To do this, several measures have been applied in all communist countries. Especially in the 1950s, strict quotas were imposed. For instance, placement in schools and universities was reserved for children of farmers and manual workers. In fact, coming from a bourgeois background could be a reason not to be admitted to higher education. It could therefore be expected that such rigorous measures would have a strong impact on the distribution of educational opportunities. In the same vein, a trend towards a more open society could be foreseen. Furthermore, the chances for children from diverse social backgrounds to obtain an educational degree may be expected to become very similar. We might even expect that the chances for children from the lower social classes to get a (high) educational degree would become better than for children from the higher classes.

However, previous analyses hardly suggest that the destratification experiment has accomplished its goals in all respects, and certainly not with respect to educational opportunity (Peschar 1990, 1993). Findings on important dimensions of stratification, such as consumption patterns and occupational mobility, hardly suggest destratification across the board, as was observed some time ago (Lane 1971, 1982; Connor, 1979). Inequality in access to (higher) education continues to resemble the structure of educational opportunity in other industrial societies: the social status of parents determines the educational chances of their offspring quite strongly. There does not seem to have been much change in this respect, even taken over an extended period of several decades (Simkus and Andorka, 1982; Robert, 1991a; Heyns and Bialecki, 1993).

Several explanations have been suggested for the apparent failure of egalitarian socialist ideology or its reversal into a contradiction of its basic tenets. One explanation of why equality policies in communist countries did not fully live up to expectations might lie in the obstacles governments face when trying to change societies. It is probably an illusion to believe that the life chances of children from various backgrounds can easily be regulated by centrally governed policies. Even in situations calling for severe measures, people will always try to find a way to provide their children with a good education. And people in higher positions have more resources and probably more ambition to do so. Therefore, people in higher positions are assumed to be more successful in using or circumventing official regulations in order to improve their own life chances and those of their children.

Another explanation is that the policy measures on education taken by communist regimes were not always as rigorous as suggested. According to published sources (e.g. Simkus and Andorka (1982) on Hungary; Gerber and Hout (1995) on Russia) and several spokesmen, the educational policies were upheld particularly in the 1950s, the period of orthodox communism, but became much weaker in later decades. In Hungary, for example, dedication to these policy aims waned again from the early 1960s on, with the “backdoor” liberalization of the Hungarian economy. In Russia, such policies have never been explicit, not even at their peak in the Khrushchev era around 1960 (Gerber and Hout, 1995). However, in other countries, especially Czechoslovakia, they were upheld much longer and lasted well into the 1980s.

A third reason why the discriminatory policies hardly had any noticeable effect in the communist countries might be that the measures had unintended effects. They may have created new forms of social inequality or inadvertently enlarged the differences between social groups. In this light, various “New Class” theories have been proposed by several students of state socialist societies. These theories postulate that the traditional opposing classes (owners vs non-owners) have been replaced by new contrasts in socialist societies.

These theories of stratification processes found their best-known exponent in Djilas (1983) [1957]. His “New Class” thesis postulates that under socialism, political resources have replaced other determinants of social stratification. The ruling political class constitutes a status group with its own cultural devices to establish social closure in much the same way as envisaged by Weber (1972) [1921] in his notion of social stratification. According to Weber, the political elite ensures its own reproduction by monopolizing access to positions of power, privilege, and status. This is accomplished by direct discrimination of others and by exercising control over indirect channels of social mobility. If this were the case in Eastern Europe, one would expect membership of the political elite to be of major importance in gaining access to (higher) education. Indeed, we know that education and diplomas comprised the major selection mechanism in the stratification process under socialism.

Djilas (1983) [1957] still identified the members of the new class with a proletarian vanguard that entrenched its position inside the state bureaucracy. Two decades later, Gouldner (1979) and Konrad and Szelenyi (1979) argued that the leading groups in state socialist societies are not proletarian at all, but more of an intellectual breed.

(However, see Konrad and Szelenyi (1991) for critical remarks.) The latter authors have come to characterize communist rule as the “final victory of intellectuals over workers (and capitalists).” The core role of education in distribution and reproduction processes of whatever kind in state socialist societies suggests they may be right. According to this argument, Plato’s admonition that “the [ideal] society... can never grow into reality... till philosophers become kings in this world, or till those we now call kings and rulers really and truly become philosophers, and political power and philosophy come into the same hands...” (Plato, 1987 [ca 400 B.C.], p. 263) has become more topical than Popper (1963) would have ever imagined in his criticism of totalitarianism. Findings about the social composition of communist party members (Szelenyi, 1987) show that the higher educated are strongly overrepresented in the political elite.

The idea that cultural differences have replaced the earlier forms of social inequality has existed for a long time in Eastern European stratification research. Early evidence in favor of this hypothesis was provided by Wesolowski and Slomczynski (1968) for Poland and Machonin (1969, 1970) for Czecho-Slovakia. These authors argued that cultural differences under socialism are particularly large and constitute the pivotal element of distribution in their societies. This hypothesis has been advanced repeatedly by later Eastern European stratification researchers (e.g. Kolosi and Wnuk-Lipinski, 1983; Robert 1984, 1989). Now, one may argue that this vivid interest in cultural inequality was simply a substitute for research on political and economic inequality, which was obstructed by prevailing political circumstances. Yet it may also be true that under circumstances that prevent people from acquiring material resources, individuals will tend to concentrate their socially distinctive and socially reproductive behavior on the accumulation of cultural resources. Those who can successfully accomplish this will be the best off in the distribution of status and privilege.

If this is indeed true, then a surprising parallel arises with the analysis made by the French sociologist Bourdieu (Bourdieu and Passeron, 1994 [1970], who analyzed cultural strategies of social reproduction in bureaucratized, market-regulated societies. Not on the banks of the River Seine but on the banks of the Duna, Vltava, and Wisla would “cultural capital” find its best yield. According to Bourdieu’s cultural reproduction theory, two basic resources determine one’s position in the stratification process. On the one hand there is “economic capital”, which is more than (a) monetary resources (income, wealth); it also presumes (b) economic and commercial skills, (c) a general orientation towards and taste for conspicuously displayed wealth, and (d) a corresponding social network. Bourdieu contrasts this with “cultural capital,” which consists not only of (a) formal credentials and qualifications (education) and (b) knowledge and expertise, but also of (c) a general orientation towards and taste for intellectual complexity, and (d) a corresponding social network. Whereas classical stratification theories assume that material and cultural resources go together, cultural reproduction theory points to their differential consequences and their different value in varying contexts. Cultural resources are more difficult to appropriate than material resources, since they can only be generated in a long process of socialization, in the parental family and in the educational system. As a

consequence, cultural inequalities are intrinsically more enduring and resistant to outside intervention than economic inequalities (Kelley and Klein, 1981). While the equalitarian effects of some of these exogenous processes — such as educational expansion, the increased influence of parents in schools, as well as the increased credentialism in bureaucratized societies — may have caused the importance of material resources to decline, cultural inequalities are on the rise.

Some recent research has explicitly tested the hypothesis about the relatively large and growing part played by cultural resources in the stratification process under state socialist conditions. Several authors have confirmed the conclusion, reached in earlier research (see above), that socialist societies remain highly stratified in cultural respects. However, the hypothesis that this applies to a larger extent than before has not found unequivocal support. For instance, in research on educational attainment in Hungary, Peschar (1990) and Ganzeboom et al. (1990) find stronger effects in older cohorts than in younger ones. However, reviewing more recent Hungarian data, Robert (1991b) finds increasing effects of cultural background on educational achievement.

In the remainder of this paper, we assess the trends in intergenerational educational reproduction in Eastern Europe during the communist era. On those grounds, we can determine the relative importance of political and cultural resources for educational attainment.

Data and research design

In order to understand the mechanisms of educational reproduction, we have analyzed data from large-scale surveys that have been held in six Eastern European countries. Our research design uses cohorts as baseline units of historical comparison.

The data analyzed here consist of rather large-scale samples (N =about 5000 in each country) of the general population of Bulgaria, the Czech Republic, Hungary, Poland, Russia, and Poland in 1993. The data were collected as part of the project “Social Stratification in Eastern Europe”, directed by Ivan Szelenyi and Donald J. Treiman (Treiman and Szelenyi, 1993a,b). It is conducted in collaboration with researchers from the countries surveyed, the United States, and the Netherlands. The surveys are funded by the (American) National Science Foundation and the Netherlands Organization for Scientific Research NWO (Treiman and Szelenyi, 1993a), as well as by contributions from the countries under study.

The survey instrument goes beyond the usual stratification and mobility survey (e.g. Peschar, 1993) in several ways. First, explicit measures of material, cultural, and political resources are used. Furthermore, the data were collected after the transition in 1989; that is, the surveys were held under political circumstances that are more liberal than before. Therefore, the data can be assumed to provide a more accurate picture of peoples’ educational careers and their social background. In addition, the specific contribution of the present analysis is that, unlike earlier efforts, we have large-scale and highly comparable data at our disposal and thereby get a general and comparative perspective on educational opportunities. Moreover, while

there is much high-quality data on educational opportunities in Hungary and Poland, and to a somewhat lesser extent in Czechoslovakia, the data from Bulgaria and Russia leave much to be desired. The analysis presented below should therefore be seen as a first attempt to draw these countries into the pool of countries available for the comparative analysis of social stratification and social mobility.

The surveys of these countries differ somewhat in terms of the age restrictions placed on the selected respondents. To make the data as comparable as possible across the countries, the respondents we selected in all countries had to be between 21 and 69 years of age at the time they were interviewed. Thus, the youngest and eldest respondents were excluded. Since the data were collected in 1993, these age restrictions provide us with information on the process of educational attainment for the cohorts that range from those who attended school around 1940 (our oldest respondents) to those who attended school around 1985 (our youngest respondents).

To examine trends in intergenerational educational reproduction in the six countries under investigation, we have divided the data into 5-year wide cohorts. These cohorts constitute the baseline units of our historical comparison. Their midpoint values correspond to the year when the members of the cohort were on average 14 years of age (i.e. we coded a cohort as: cohort=year of birth+14). We chose this value because this is the age at which people make crucial decisions on educational careers. Moreover, this value gives the best approximation of the historical contexts (such as war and revolution) that are associated with educational careers. It is important to realize that by necessity, the analysis of educational attainment using cohort data refers to events that happened a long time ago for most of the respondents. The “average” respondent made his/her major decision around 1960, more than 30 years before the date of survey; the oldest respondents made these decisions around 1940 and the youngest around 1985. In sum, cohort design applied in this paper offers a unique opportunity to examine long-term trends in educational reproduction.

Developments in educational attainment and parents’ political and cultural resources

This paper considers the process of educational attainment over the past decades. In particular, it focuses on how parents’ education, cultural resources, and political resources affect their children’s level of education. The aim is to shed light on the developments in these effects over time. However, before we start narrowing our focus to these issues, we take a look at the big picture. We first review developments in the level of educational attainment in the six Eastern European countries. We then trace trends in parents’ political and cultural resources.

Educational attainment is analyzed for three persons: respondent, father, and mother. As the comparative measure of educational attainment, we use the number of years it took to achieve a given educational level. For the respondents, this was constructed from a complete roster of educational attainment. For the parents, the highest level attained was recoded into the approximate number of years of edu-

cation, using expert judgment and conversions suggested by the results for the respondents.

The data were sampled in the 21–69 age range. We use the full age range for our analysis of educational attainment. In studies of educational attainment elsewhere, it is common to increase the lower age boundary. This usage is based on the argument that people in their early twenties are likely to get additional schooling, which endangers the validity of cohort comparisons for historical analysis. We prefer to remedy this problem in the design by adding (an arbitrary) two years to the score of those who are still in school. We doubt that this choice makes much difference to the final results as the large majority of that population never receives any education in their twenties. Even among the group of 21–24 years old, only a slight majority is enrolled in school. It is important to look at the educational attainment of the youngest in the datafile, as they are our only window on events since 1989. Of course, this would only apply to the small proportion of the cohort that entered tertiary education in the period of transition.

Fig. 1 shows the educational distribution of men and women in the six countries in the period 1940–1985. In the beginning of that period, there were significant differences between countries in regard to the average number of years it took for people to finish their education. The mean level of education was highest (about 12 years) in the Czech Republic — especially for men. It was the lowest in Bulgaria (about 10 years). The data also show some similarities to other industrial countries. For instance, around 1940, the average educational attainment of women was significantly lower than that of men. Furthermore, the data show that the average educational attainment has expanded greatly since 1940 in the socialist countries, as elsewhere. But unlike other industrial countries, most of the rapid expansion took place in the period 1940–1970 and was followed by a clear slowdown in the 1970s and 1980s. By 1975, Bulgarians, Hungarians, Poles and Slovak men and women stayed in school about one and a half time as long as in 1940. Educational expansion

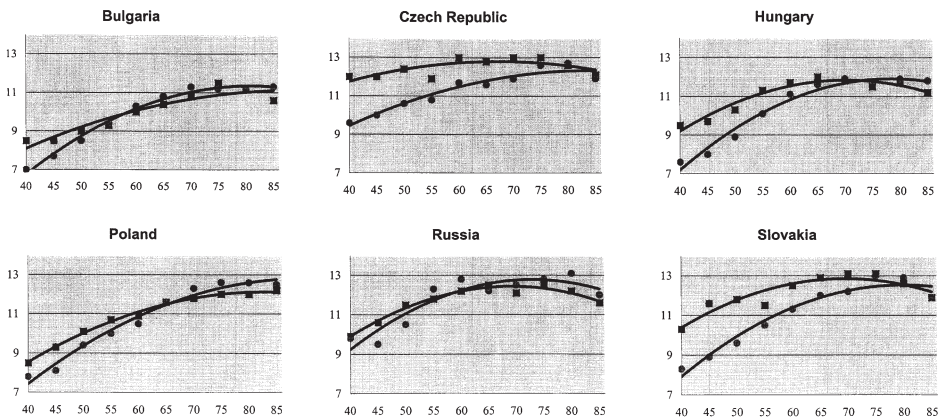


Fig. 1. Educational expansion (in years of education) in six Eastern European countries, birth cohorts in school (age 14) 1940–1985.

proceeded at a much slower pace for Slovak men and for Czech men and women, all of whom started at a considerably higher level in 1940. In particular, Czech and Slovak men have made remarkably little progress since 1940. The developments in educational attainment differ between men and women in all countries. Women have increased their educational attainment more than men. And by 1975, none of the countries displayed much difference between men and women in terms of years of schooling.

In order to assess the value of *parents' political resources* for their children's educational career, we constructed an indicator of favorable political resources on the basis of whether parents (mother and father) of the respondent were members of the Communist Party. Unfortunately, there is no information in the dataset on when parents were members of the party, nor on their relative position in the party hierarchy. It is still reasonable to assume that the questions pick up some of the political resources at the time that the respondent was growing up and major decisions about his/her educational career were made. On average, 27% of the respondents in the Czech Republic, 23% in Russia, and between 16 and 19% in the remaining four countries indicated that one of their parents had been a member of a communist political party. It is, of course, hard to judge to what extent respondents gave reliable reports of their parents' party membership. However, the percentage of respondents who report being a member of a communist political party in 1993 is in accordance with official statistics. Therefore, we are confident that information given by respondents about their parents' party membership is also accurate.

The percentage of respondents in the various cohorts who reported that their parents have been members of a communist political party is given in Fig. 2. Parents' party membership was rather rare among the older cohorts, but it increased over time. The increase might be simply a period effect: the parents of older respondents had less time to become a member of a communist party. In the Czech Republic, the percentage (36%) of parents who had been a member of a communist party

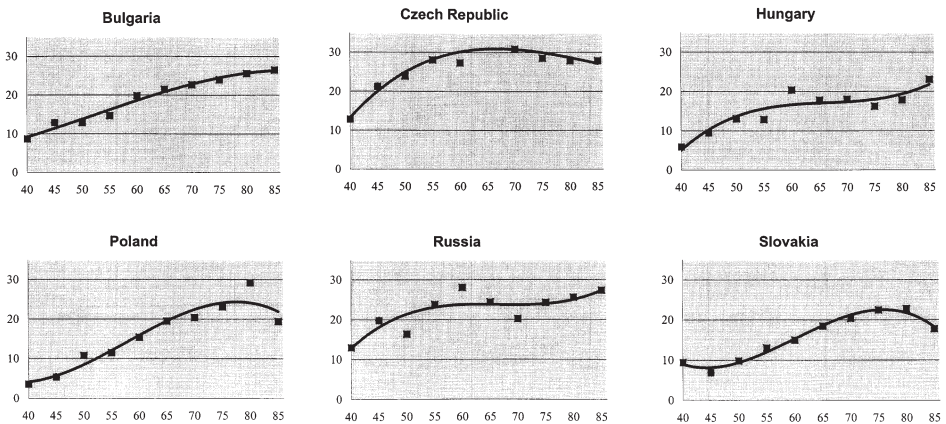


Fig. 2. Parents' party membership (in percentages) in five Eastern European countries, birth cohorts in school (age 14) 1940–1985.

peaked around 1965. In the other countries, it increased over the whole period and reached about 20% at its highest point.

It should be kept in mind that in all six countries, the group of party members included a sizable proportion of highly educated parents. The correlation between parental party membership and parental education is strongest in Russia and Bulgaria (well over 0.30). In the other countries, this correlation is weaker but consistently significant (about 0.20). These findings emphasize the advantage of examining the effects of cultural and political resources simultaneously by means of multivariate analysis.

To measure *parents' cultural resources*, the survey included a battery of questions on the cultural practices of the parents of respondents when the respondent was "around 14 years old." The items included in this questionnaire closely parallel those in instruments used to measure cultural resources in other surveys. Respondents were asked how often their parents went to museums, how often they went to plays, listened to classical music at home, how many serious (literature/science) books they read, and how often they went to a public library. In addition, they were asked whether there had been a dictionary and/or an atlas in their parental home. The TARKI Hungarian stratification surveys of 1982 and 1986 showed strong effects of these variables on the educational attainment of respondents (Ganzeboom et al., 1990). Notwithstanding, the present paper treats these indicators as an expression of one underlying dimension: command over "cultural resources." This stance is justified by the high intercorrelation between the eight items and the corresponding high level of Cronbach's reliability coefficient.³ The index on cultural resources was created by averaging the indicators standardized over the total sample. In order to make effects comparable cross-nationally, the resulting index was then standardized again within countries.

The means and standard deviations of the cultural resources index for all the cohorts in all six countries show only moderate historical variations, which parallels findings in other countries. In case of strong historical variations, it becomes an issue whether the variable should be conceptualized as a positional good that needs to be standardized within cohorts. Given the low over-time variation, this is not of much importance here. Nevertheless, we have still taken the trouble to standardize the index of cultural resources within countries as well as within cohorts, allowing an interpretation of cultural resources as a relative (positional) good, for which the scores need to be interpreted relative to cohort means.

Models

As stated above, the aim of this paper is twofold. Let us now dwell on the first aim, which is to assess the historical variations in patterns of educational reproduction. To

³ The reliability coefficients (α) are: Bulgaria 0.91, Czech Republic 0.80, Hungary 0.86, Poland 0.82, Russia 0.84, and Slovakia 0.82.

investigate the effect of parents' education on the educational attainment of their children and the developments in that effect, we analyze our data by applying a regression model with multiplicative interaction terms.⁴ The equation for Model I, which is used in analyzing data for men and women in the six countries separately, can be written as follows:

$$\begin{aligned} \text{Child's education} = & \beta_{1i} * \text{COHORT}_i + \beta_2 * \text{Parents' education} \\ & + \beta_3 * \text{COHORT}_i * \text{Parents' education} \end{aligned} \quad (1)$$

where the variables "Child's education" and "Parents' education" (i.e. the average education of father and mother) refer to the number of years it took to complete a given educational level for children and their parents, and the variable "COHORT" refers to the 5-year wide cohorts we designate as units for historical comparison. The variable "COHORT," as pointed out above, originally ranged from 1940 to 1985. This range covers the period during which the oldest and the youngest respondents in our data set were 14 years of age and important decisions on their educational careers were made. We centered this variable around the cohort of 1960 by subtracting 1960 from its original value. Accordingly, the intercept coefficient (β_2) for the interaction effect of parents' education pertains to that effect around 1960.

The variable "COHORT_{*i*}" is included twice in Model I. First, this variable is included as the all-over intercept and takes into account the developments in the average level of educational attainment, net of the expansion of parental education. As mentioned earlier, educational expansion for both men and women in the six countries was more progressive in the beginning of the period under investigation and weak (or even absent) near the end of it. Therefore, we included the variable "COHORT_{*i*}" in a discrete manner — i.e. specifying dummy variables for the various cohorts — allowing for these non-linear trends. As a result, the β_{1i} coefficient represents the mean level of education in the distinguished cohorts.

Second, the variable "COHORT" is included in the model as an interaction term with the variable "Parents' education." Here it represents the developments in the effect of parents' resources on their children's educational attainment. It is these developments that are under investigation here. To examine the nature of these developments, we evaluate three nested versions of this model. In the discrete cohort model (A), it is assumed that effect of parents' education differs between cohorts and is allowed to do so in free variation (COHORT_{*i*} = COHORT_{*i*}). We estimate a different effect for each of the distinguished *i* cohorts. Since we distinguished 11 five-year-wide cohorts, this model requires ten degrees of freedom (number of cohorts – 1) and is our least parsimonious model. In the linear change model (B), it is assumed that the differences between cohorts can be modeled as a linear trend (COHORT_{*i*} = COHORT), which requires a single degree of freedom. Comparison

⁴ In all models, we controlled for the effects of the type of region respondents lived in. Dummy variables were included for (1) a village — less than 5000 persons, (2) a small town — 5000–10,000 persons, (3) a larger town — 10,000–100,000 persons, and (4) a city — more than 100,000 persons but not the capital city. Capital cities were taken as reference category.

between the discrete cohort model (A) and the linear change model (B) leads to a crude test of whether there are non-linearities in the historical patterns of effects. Since this is a nine degrees of freedom test, it may still hide significant spikes in the data that might be uncovered by more parsimonious specifications of the non-linearities. We guard against these pitfalls by conducting a visual inspection of the parameters of models (A) and (B). Finally, we test whether the linear changes modeled in (B) are statistically significant, or whether the even simpler model (C) of no historical changes ($\text{COHORT}_i=0$) still fits the data.

Let us now turn to the second aim of this paper and examine the extent to which the effect of parents' education on their children's education is mediated by the effects of the cultural and political resources of the parents. Concomitantly, we examine the extent to which these latter effects have changed over the last decades. The model we use to study the effects and their changes Model II is similar to Model I. But the second model also included the variables for "Parents' party membership," "Parents' cultural participation" and the interaction between these variables and "COHORT" also are included:

$$\begin{aligned} \text{Child's education} = & \beta_1 * \text{COHORT}_i + \beta_2 * \text{Parents' education} \\ & + \beta_3 * \text{COHORT}_i * \text{Parents' education} + \beta_4 * \text{Parents' party membership} \\ & + \beta_5 * \text{COHORT}_i * \text{Parents' party membership} \\ & + \beta_6 * \text{Parents' cult. participation} \\ & + \beta_7 * \text{COHORT}_i * \text{Parents' cult. participation} \end{aligned} \quad (2)$$

where the variable "Parents' party membership" is coded 1 for children who indicated their parents had been a member of a communist party, 0 if they did not; and the variable "Parents' cultural participation" is a score on an index that we standardized within each cohort within each country: in each cohort the mean is rescaled to zero, the standard deviation to 1. The centering around the mean of the scores within a cohort avoids collinearity between the variables "cultural participation" and "cohort". In addition, by standardizing the index of cultural participation, the historic changes in the distribution of parents' cultural participation in a society do not influence the results of our analysis. In Model II, again we centered the variable "COHORT" around cohort 1960. As a result, the (intercept) coefficients β_4 and β_6 refer to the effects of parents' party membership and cultural participation in the period around 1960, and the trend parameters (β_5 and β_7) refer to absolute changes in these effects compared to these effects in that period.

Trends in educational reproduction

We first address a descriptive issue: Has socialism changed the pattern of educational reproduction at all? Then we discuss whether the observed patterns of change in access to (higher) education are linear or non-linear. To examine which pattern of change describes our data best, we employ Model I and compare three versions

of it. One of these represents non-linear changes (using discrete cohorts) in the effects of parents' education on their children's education (Model A). Another one assumes linear changes over cohorts (Model B). The third version assumes no change (Model C). The results of comparing these models are rather consistent. In all twelve cases — six countries, men and women separately — an adequate description is given by a linear summary of the developments in the effects of parents' education on the level of education attained by their children. The relevant coefficients of Model B for the six countries investigated are presented in Table 1.⁵

Let us start by examining the magnitude of the effects of parents' education on that of their children. Recall that we centered the variable "COHORT" around the cohort "1960". Accordingly, the effects of parents' education in the cohort "1960" are represented by the estimated coefficients (β_2) presented in Part A of Table 1. Both the dependent and independent variables (respondent's education and the mean of father's and mother's education) in Model I are operationalized in the same way in the six countries, and these show similar standard deviations. Therefore, the estimated effect parameters can be compared among the countries. The coefficients vary between 0.40 and 0.60 in Bulgaria, the Czech Republic, Hungary, and Slovakia. Internationally compared, these values are rather high (see Ganzeboom and Treiman, 1993). The values in Poland (0.38 for men and 0.39 for women) are somewhat lower, but only those for Russia (0.28 for men and 0.33 for women) are somewhat low from an international perspective. On average, these results square with conclusions drawn in earlier studies. Namely, they suggest that communist regimes have not succeeded in truncating the intergenerational transmission of status through education. In this respect, the low values of the coefficients for the effects of parents' education on their children's education in Russia are somewhat surprising. However,

Table 1
Selected coefficients from regression models for (trends in) 'uncontrolled' effects of social background in educational attainment^a

	BUL	CZR	HUN	POL	RUS	SLO
<i>A. Educational reproduction ca 1960</i>						
Men	0.404	0.489	0.537	0.375	0.275	0.561
Women	0.467	0.595	0.483	0.387	0.326	0.600
<i>B. Trends in educational reproduction (change/10 years)</i>						
Men	-0.035	-0.018ns	-0.076	-0.029ns	0.009ns	-0.094
Women	-0.035	-0.059	-0.018ns	-0.014ns	0.004ns	-0.094
<i>Number of cases</i>						
Men	2164	2582	1984	1649	2067	2239
Women	2355	2902	2160	1713	2388	2439

^a All effects are measured in years of schooling per unit. Units are: Parents' Education: mean years of education father and mother. Trends: change per 5 years. ns: not significant: $p > 0.05$.

⁵ An appendix containing all results of the analyses carried out can be obtained upon request from the authors.

since we have no other data set for Russia at our disposal, we cannot draw definite conclusions on the (low) level of educational reproduction in Russia over the past decades.⁶

The next question to be addressed is: How much have the effects of parents' education on the educational level of their children changed during the period 1940–1985? Part B of Table 1 shows the relevant (linear) trend coefficients, which reveal that the effects of parental education have decreased in four countries for both men and women. Again, Poland and Russia form an exception: the trend coefficients are virtually zero. This value indicates that hardly any long-term change in the level of educational reproduction has occurred and that this effect remained at the low level discussed above during the whole period from 1940 until 1985. In two other cases (that of Czech men and Hungarian women), the trend coefficients also are statistically insignificant. However, in these cases, the trend parameters have a negative value. Not only the sign but also the value of the estimated trend coefficients can be interpreted in a straightforward way. These represent a decline in the effects of parents' education per decade compared to the effects on members of the middle cohort, as presented in Part A of Table 1. Among other things, this implies that for Hungarian men and for Slovak men and women in the last cohort (who entered the educational system around 1985), parental influence on their educational level was about one-third of the influence observed in the middle cohort (who entered around 1960) and was almost as low as the Russian level. Considering the low intercept coefficient in Russia, this low Russian level is almost reached in Bulgaria in 1985 even though Bulgaria has a relatively moderate negative trend coefficient. In conclusion, our analysis reveals that on average the advantages of higher levels of education have gradually diminished over the communist period. By and large, the effects of parents' education on their children's education declined by about half over the period 1940–1985. In view of the results of earlier studies on this topic, this is an important new finding.

Effects of political and cultural resources

Finally, we ask: To what extent were cultural resources (as measured by parents' cultural practices when the respondent was growing up) and political resources (as measured by parents having been a member of the socialist or communist party) important to educational careers under communism? The underlying issue here is the debate on intellectuals as the "New (leading) Class" under socialism (Konrad and Szelenyi, 1979). To answer this question we analyze our data employing Model II. Besides parents' education, this model includes their political and cultural resources as explanatory variables.

⁶ The dataset collected by Gerber and Hout (1995) also contains information on educational reproduction in the former Soviet Union, but only a regional part of that country is covered. Analysing their data using the same models results in somewhat higher reproduction coefficients than our analyses (personal communication Ted Gerber).

Also for this model, we compared three versions. For each of the effects, we assumed respectively (A) non-linear changes across cohorts, (B) linear changes, or (C) no changes. The choice between the different versions of the models is not unequivocal for the various cases. In seven of the twelve cases (six countries, men and women taken separately), the non-linear trend model describes our data best; in the other five, the linear trend model is most suitable. However, the amount of variance explained by both models is very similar, and the more parsimonious linear version yields an adequate fit in all cases. Therefore, Table 2 presents the central coefficients of the linear version of Model II.

Parts A, C, and E of this table show the (intercept) coefficients (β_2 , β_4 , and β_6), representing the effects of parents' education, parents' political resources, and their cultural resources, respectively, around 1960. Parts B, D, and F show the (trend) coefficients (β_3 , β_5 , and β_7) representing the (absolute) changes per 10 years in the mentioned effects. Both the intercept and the trend coefficients can be compared across countries and between men and women. The (intercept) coefficient for the effect of party membership represents the difference in the number of years of education attained between children of party members and children of parents who had

Table 2

Selected coefficients from regression models for (trends in) 'controlled' effects of social background in educational attainment^a

	BUL	CZR	HUN	POL	RUS	SLO
<i>A. Educational reproduction ca 1960</i>						
Men	0.284	0.299	0.304	0.192	0.154	0.348
Women	0.335	0.389	0.266	0.216	0.205	0.356
<i>B. Trends in educational reproduction (change/10 years)</i>						
Men	-0.009ns	0.014ns	-0.021ns	-0.010ns	0.035ns	-0.020ns
Women	-0.023ns	-0.014ns	-0.007ns	0.014ns	0.023ns	-0.043ns
<i>C. Effect of parents' party membership ca 1960</i>						
Men	0.808	0.350	0.260ns	0.067ns	0.713	0.582
Women	0.618	0.198	0.059ns	0.404ns	0.706	0.552
<i>D. Trends in effect of parent's party membership (change/10 year)</i>						
Men	-0.327	-0.069ns	-0.191ns	0.228ns	-0.249	-0.166ns
Women	-0.063ns	-0.096ns	0.025ns	0.054ns	-0.020ns	-0.285
<i>E. Effect of parents' cultural resources ca 1960</i>						
Men	0.820	0.705	1.074	1.091	0.552	0.756
Women	0.770	0.729	1.062	0.909	0.591	0.844
<i>F. Trends in effect of parents' cultural resources (change/10 years)</i>						
Men	-0.153	-0.110	-0.360	-0.226	-0.128	-0.205
Women	-0.067ns	-0.105	-0.058ns	-0.195	-0.173	-0.087
<i>Number of cases</i>						
Men	2164	2582	1984	1649	2067	2239
Women	2355	2902	2160	1713	2388	2439

^a All effects are measured in years of schooling per unit. Units are: Parents' education: mean years of education father and mother. Parents' party membership: (0) never (1) ever member communist party (father or mother). Parents' cultural resources: standardized index of 8 items (mean=0, SD=1). Trends: change per 5 years.

not belonged to a communist party. The (intercept) coefficient for cultural resources represents the difference in years of education between children whose parents differ one standard deviation on the Z-score of the variable cultural participation. Since we also centered the variable "COHORT" in Model II around the 1960-cohort, the (intercept) coefficients for the effects of parents' education, cultural resources, and political resources refer to the effects of these factors in that period.

An interesting result of our analysis is the extent to which the effect of parents' education on their children's educational attainment is interpreted by the added variables, namely parents' party membership and cultural participation. The controlled effect of parents' education (Part A in Table 2) varies between 0.19 and 0.39 in the five satellite states of the Soviet Union, and is 0.15 (for men) and 0.20 (for women) in Russia. A comparison of these controlled effects with the uncontrolled effect of parents' education (given in Part A of Table 1) demonstrates that on average, one-third to one half of the educational reproduction is mediated via party membership and cultural participation. Cultural participation here plays the major role, while the effect of parents' party membership is modest.

The estimated coefficients for the effects of parents' party membership (Part C in Table 2) are all positive but differ substantially in size. The effect of parents' party membership, for example, is statistically insignificant in Hungary and Poland, whereas in Bulgaria and Russia these effects are considerable (about 0.7 years). It is probably no coincidence that these latter countries show the weakest effects of parents' education on their children's education. However, there is evidence that the effect was relatively strong in the early communist period but had declined to insignificance for the younger cohorts.

The estimated effects of parents' cultural participation on their children's education (Part E in Table 1) are not directly comparable to the effects of the other variables. Nevertheless, since the effects are about four times as large as their standard errors (not shown), we can conclude that this factor has a much stronger impact than parents' party membership. Without exception, all pertinent coefficients for parents' cultural participation are positive and statistically significant. Moreover, they hardly differ between men and women. The coefficients are highest in Hungary, the country where Bourdieu's cultural reproduction theory has been corroborated repeatedly before. The smallest effect of cultural participation is found in Russia, but even there the effect is substantial. This leads us to conclude that in all six countries, the cultural resources of parents are highly beneficial to their children's educational attainment. This conclusion corresponds to the hypothesis that socialist intellectuals form a "New Class". Those belonging to this group are able to use the established socialist distribution of power to their own advantage.

However, the (interaction) coefficients that pertain to the trends in the effects of parents' cultural resources on their children's education (Part F in Table 1) reveal that the effects of cultural participation have declined substantially over the past decades. Thus, if the intellectual elite took advantage of the socialist circumstances, they profited more from the orthodox than the liberal brand of socialism. The pertinent trend coefficients have high, statistically significant, negative values and thus imply a substantial decline in the effects of parents' education in most countries.

For example, the effect of parents' education on the educational attainment of Hungarian men was large in the older cohorts (around 1940) but is almost absent in the most recent cohorts (around 1985). This result replicates earlier findings for the Hungarian case (Ganzeboom et al., 1990). Finally, we conclude that the decline in the effects of cultural participation, together with the decline in the effects of parents' party membership, are largely responsible for the decline in the uncontrolled effects of parents' education on that of their children in the communist countries, as observed earlier.

Conclusions

The results of the analyses discussed above lead us to three main conclusions. Our first conclusion is that in all six Eastern European countries under investigation, parents' education has a substantial effect on their children's education. Although no explicit comparisons with other countries have been made, we found that the strength of the effects of parents' education in five out of the six countries is even stronger than usually found in Western countries with a market economy. Only in Russia did we find a level of intergenerational educational reproduction that is rather weak, from an international perspective.

Our second main conclusion is that parents' party membership (to a small extent) and their cultural participation (to a considerable extent) influence the level of education their children attained. These factors explain on average about one-third to a half of the effect of parents' education on educational attainment. These findings thus support the "New Class" theories, which assume that intellectuals tend to benefit most under a state socialist regime.

The slow but consistent decline, in the determinants of educational attainment in all countries over the last decades forms a third important conclusion of this study. In five countries, the parents' social background lost its impact on their children's educational career; while in Russia this impact was already limited at the beginning of the period under investigation. The gradual expansion towards openness occurred with respect both to the effects of parents' education and the effects of parents' political and cultural resources. In conclusion, there seems to be an unmistakable trend toward a situation where ascriptive characteristics have only a limited impact on educational attainment.

The conclusions drawn from this study are in accordance with the general pattern of trends in educational attainment found in other countries. Due to a process of educational expansion in recent decades, parents have less influence on their children's educational career than in earlier decades. This is probably due to two supplementary mechanisms. First, because of educational expansion, almost all children spend a number of years in the educational system and make it to the "second level". Second, since choices about children's (further) educational career have to be made when they are older (de Graaf and Ganzeboom, 1993), children's educational chances have become less dependent on their parental background (Rijken, 1998). The extent to which the political climate in the Eastern European countries has fostered this

process of educational expansion and its consequences for educational reproduction remains a topic for further research.

Another topic for further research is the remarkably strong decline in the effects of parents' cultural resources in the six Eastern European countries. In the Netherlands, by contrast, recent analyses hardly showed any decline in cultural and educational reproduction over the past decades (van Eijk and de Graaf, 1995). Differences between Western market economies and state socialist countries might be due to the relatively strong educational expansion in Eastern Europe. However, for a better understanding of the trends in educational success and educational reproduction, both types of countries have to be compared explicitly (Rijken, 1998).

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