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# THE IMPACT OF FINANCIAL AND CULTURAL RESOURCES ON EDUCATIONAL ATTAINMENT IN THE NETHERLANDS

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*Collins's and Bourdieu's conflict theories of educational stratification are elaborated into two testable hypotheses. One hypothesis states that the effects of parents' financial resources on children's educational attainment have decreased; the other states that the effects of parents' cultural resources have increased. I estimate linear structural models in which the educational attainment of the two oldest siblings in a family is predicted by social background and by indicators of parents' financial and cultural resources. Cohort comparisons show that the influence of financial resources has disappeared since 1950 and that the influence of cultural resources, which was small before 1950, became even smaller after 1950. The association between parents' participation in high culture and children's educational attainment proves to be spurious.*

## INTRODUCTION

Contemporary research on social stratification and education has shown that although some differences in educational attainment among children of different social backgrounds have disappeared during the last forty years, other differences have been stable (Duncan 1967; Hauser and Featherman 1976; Broom and Jones 1976; Fujita 1978; Halsey, Heath, and Ridge 1980; Mare 1981; Simkus and Andorka 1982; Dronkers 1983). Inequalities in educational attainment due to race, sex, and region have decreased, but inequalities that can be attributed to parents' occupation and education have remained stable. There has been increasing equality in school continuation chances at the early decision points in educational careers, but at the same time, school careers have become longer. As a result, the overall effect of parents' socioeconomic characteristics on children's educational attainment has been amazingly stable. This conclusion holds true across very distinct countries, e.g., the U.S., England and Wales, Germany, Japan, Australia, Hungary, and the Netherlands.

In the first part of this paper, I discuss differing theories of the effect of socioeconomic background on educational attainment and present a short review of recent theoretical-empirical studies. From conflict theory, I develop two hypotheses

about the impact of financial and cultural resources on educational attainment. In the second part of the paper, I discuss the data and methods used. I present linear structural relation models in which the effects of socioeconomic background on educational attainment are mediated by indicators of financial and cultural resources. I test the hypotheses with Dutch data. In the last part of the paper, I discuss the results.

## THEORIES OF EDUCATIONAL STRATIFICATION

In traditional functionalist theory, the association between socioeconomic background and educational attainment is explained by technological conditions: The association changes when technology changes. Older western societies could afford status and educational attainment regimes in which ascribed status was the most important criterion. In these societies, technology was simple, and only a few highly educated individuals were needed. The inability of most people to buy their children much education was not a problem, because society did not need many highly educated individuals. Therefore, we can hypothesize that in the past, the association between socioeconomic background and educational attainment could be attributed to the distribution of financial resources. Family income and family size determined the amount of money that could be used to buy education.

According to functionalist theory, the rapidly changing technology in this century generated the need for a better-educated labor force. At the same time, society became more affluent. People could better afford to buy their children higher education. Also, government began to sell education below the real costs. This can be traced to two trends. First, human capital economists persuaded governments to provide the education necessary for increasingly more difficult jobs (Schultz 1961; Denison 1967). Second, and probably more

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important, western industrial nations began to subscribe to an egalitarian-democratic ideology, in which equality in educational opportunity was highly valued (Lenski 1966). Especially in the European welfare states, education became practically free of costs. Functionalists assume that both of these trends were brought about by technological changes. Therefore, functionalist theory predicts decreasing inequality in educational opportunity. Any inequality that still exists is considered only residual. Nevertheless, statistics show that although some inequalities—notably those associated with sex, race, and region—have decreased or vanished, inequalities due to parents' education and occupation have been stable. Other theories to explain the association are needed.

After the empirical shortcomings of the traditional functionalist approach to educational stratification were recognized, neo-Weberian theories became attractive. The major proponents of these theories are Collins (1971, 1979), Bourdieu (1973, [1979] 1984), and Passeron (Bourdieu and Passeron ([1970] 1977), all of whom have been strongly influenced by Weber's studies of status groups (Weber 1921). Status groups consist of people with similar consumption patterns and cultural styles. Their common culture is evident in the similarity in their language, opinions, manners, conventions, occupations, partners, clothes, and leisure activities. The power of the status group is not economic or political but symbolic. Collins (1971, p. 1009) argues that status groups are the fundamental units of society and that the struggle for scarce resources occurs between groups, not between individuals. The dominant status groups use their power to maintain and create structural conditions to protect their interests. According to Collins and Bourdieu, schools provide a kind of education that guarantees the better performance of high-status pupils. The culture of the highest-status group dominates the schools, giving this group major advantages. Members of lower-status groups have difficulty succeeding in this culture, thus making educational attainment a very satisfactory indicator of social standing. The dominant status groups use educational attainment as an "objective" measure to give their members the better positions in life. Society only appears to be meritocratic. In a review article of Bourdieu's work, Swartz (1977, p. 546) shows that the old way of directly transmitting status and power from one generation to the other became inappropriate, and more hidden ways were found. In the same vein, Collins argues that educational certificates are used as "credits." They admit individuals to the dominant and respectable status group.

Collins only vaguely discusses the social content of education, but Bourdieu has explicit ideas about it. Children of higher-status groups have access to cultural capital, which consists of appropriate manners and good taste. Bourdieu emphasizes the

importance of family socialization, through which the values of the formal culture and a receptivity to the *beaux arts* (classical music, theater, painting, sculpture, and literature) are inculcated. According to Bourdieu, such a receptivity is taken for granted in formal education; therefore, pupils without sufficient cultural capital encounter problems at school, especially in the higher levels of education. Pupils who are most familiar with formal culture are favored and profit more from education than other children. Self-selection also occurs, because low-status pupils consider the culture of higher levels of education impossible to attain.

This cultural transmission theory of educational stratification states that cultural resources, not financial resources, are the primary determinants of educational attainment.

#### EMPIRICAL STUDIES OF THE INFLUENCE OF CULTURAL RESOURCES

In this section, I present short reviews of three major empirical studies of the effect of cultural resources on educational stratification: Bourdieu and Passeron ([1970] 1977), Halsey et al. (1980), and DiMaggio (1983).

Bourdieu's empirical work is not very convincing, because it presents only unsophisticated bivariate analyses. Bourdieu easily convinces his readers that parents' socioeconomic characteristics, especially their occupations and education, and their participation in formal culture are statistically associated with children's educational attainment and participation in formal culture. However, he does not clarify whether this association can be explained by the influence of transmitted cultural capital. Do children of wealthy parents perform better in school because they were raised in a family in which formal culture was internalized and because such an internalization is rewarded at school? Or do they perform better just because they came from advantaged socioeconomic backgrounds? Bourdieu begs the question: He assumes that because high-SES parents and children possess cultural capital, socioeconomic characteristics are transmitted by way of cultural capital. His empirical material seems to be presented as an illustration, not as a test.

Halsey et al. (1980) define cultural resources in an indirect way. They argue that when cultural capital does exist, whatever it is, it should be at the disposal of parents who themselves have attained a high level of education. They test the thesis that parents' educational attainment has an independent effect on children's educational attainment by controlling for the effects of other background characteristics, such as occupation, class, and income. Scholastic knowledge is introduced ad hoc as a kind of cultural capital. This is not a good test either. The research question is not whether parents' educational attainment has an effect on

children's educational attainment but how this effect is to be explained. The findings presented by Halsey et al. merely provide an upper limit to the impact of cultural resources. This creates two problems. First, when noncultural resources that are associated with parents' educational attainment are not measured, the importance of cultural resources will be overestimated. Second, and more important, Halsey et al. never explicitly define cultural resources. Thus, we can only speculate about what they include. When parents' knowledge of curriculum contents (or, as in Bourdieu's cultural transmission theory, parents' participation in the formal culture) is predicted to have an effect on children's educational attainment, these effects should be tested directly. We should first test whether well-educated parents have more knowledge of education and participate more often in formal culture. Then, we should use multivariate analysis to test whether the independent effects of parents' socioeconomic characteristics decrease when scholastic knowledge and participation in formal culture are controlled. In this way the cultural transmission theory is testable. As always, a model that includes all the variables in the theory should be used.

DiMaggio (1982) convincingly demonstrates that students who participate in formal culture perform better at school, even when the effects of background and ability are controlled. Although this must be true for the cultural transmission theory to be true, it is not sufficient proof. DiMaggio did not have information about parents' participation in formal culture and thus was unable to test Bourdieu's cultural transmission theory. This paper presents a supplement to DiMaggio's studies. As will be seen, the analyses presented here are also incomplete: Data on cultural activities of children were not available.

#### HYPOTHESES

Two hypotheses can be deduced from the cultural transmission theory of educational stratification:

1. The degree to which the association between parents' socioeconomic characteristics and children's educational attainment can be explained by the distribution of financial resources has decreased over time.
2. The degree to which the association between parents' socioeconomic characteristics and children's educational attainment can be explained by the distribution of cultural resources has increased over time.

These hypotheses will be tested only for the Netherlands, where education has been almost completely free since 1950 (Idenburg 1964). All education until the age of 15 is free for everyone, and education after that age is free for those who

cannot afford it. To test the hypotheses, I compare two cohorts: one that started secondary schooling before 1950 and one that started in 1950 or later. The changes in the Dutch educational system provide an ideal test of the hypotheses. In a country where legislation has rendered financial resources unimportant, parents must use their cultural resources to help their children attain the highest level of education. A negative finding for the cultural transmission theory of educational stratification in the Netherlands would have very serious implications.

#### DATA

Data were obtained from the 1977 "Quality of Life Survey" (*Leefsituatieonderzoek*), a survey conducted by the Dutch Centraal Bureau voor Statistiek (CBS) every three years (CBS 1978). The purpose of these surveys is to obtain information about different aspects of life and well-being. A representative sample of the Dutch population aged 15 and older are questioned about their housing, health, daily activities, leisure activities, social contacts, education, occupation, and income, and about their spouse's education and occupation. The 1977 survey also contained questions about the educational attainments and ages of all the respondent's children. Oddly enough, there were no questions on the children's sex.

In this analysis, the respondents (and their spouses) are the parents. In most studies of educational stratification, this is not the case, and information about parents is very often collected by asking children retrospective questions. The design used here generates more reliable information about parents' characteristics. However, as we will see, some new problems arise.

Financial resources are indicated by the logarithm of parents' income and the number of siblings in a family. Cultural resources are indicated by the family's reading habits and participation in formal culture. Reading habits are measured by the number of hours per week parents spend reading and by the number of times per month parents visit the library. Participation in culture is measured by the number of visits parents make per month to museums (or galleries), theaters or concerts, and historical buildings. I use these two distinct scales to measure cultural resources because exploratory factor analysis showed that reading and formal culture consumption are separate activities (see Table 1). The two factors have a correlation of only .26. The two indicators of reading habits have coefficients that are near zero on the culture consumption factor, and the three indicators of culture consumption have coefficients that are near zero on the reading climate factor.

Table 1. Factor Analysis of Five Cultural Activities, Oblique Rotation ( $N = 538$ )

	Factor 1: Reading Climate	Factor 2: Culture Consumption
Library visits per month	-.055	.478
Hours of serious reading per week	.114	.658
Theater visits per month	.747	-.024
Museum visits per month	.827	-.026
Historical building visits per month	.807	.068
Correlation of factors =	.260	

Source: CBS 1978.

Children who grow up in a family with a high household income or with few siblings are presumed to have more financial resources than other children. Likewise, children who grow up in a family in which reading and participation in formal culture are customary are presumed to have more cultural resources.

The drawback in DiMaggio's analyses stems from his lack of data on parents' participation in formal culture. The drawback in the analysis reported here stems from the lack of data on children's participation in formal culture. This is a serious problem, because the cultural transmission theory explicitly assumes that cultural resources are transmitted from parents to children. However, if we find that parents' cultural resources have an independent effect on children's educational attainment, and if this effect can explain the association between socioeconomic background and educational attainment, we would have to accept the cultural transmission theory.

The analysis is restricted to families with two or more children, the two oldest of which are between 25 and 65 years old and have finished their educational careers. I selected families with more than one child to obtain more information on the educational success of families with given amounts of resources. This idea is elaborated in the next section.

Two cohorts of families were defined—one in which the oldest sibling was 41 to 65 years old, the second in which the oldest sibling was 25 to 40 years old. The age of 40 was chosen as the demarcation point because people aged 40 in 1977 began their secondary schooling in 1950, when education became free for students under the age of 15 and when the length of compulsory education was increased to eight years. The younger cohort benefitted from the changes during their entire secondary and postsecondary educational careers. The older cohort contains 221 families, the younger cohort 317 families, which gives a total of 538 families. I used pairwise deletion of missing

cases. Means, standard deviations, and zero-order correlations of all variables for the two cohorts are reported in Table 2.

One problem in the research design is that parents' leisure activities and income are measured at the time of the interview and are assumed to have affected children's educational careers some time before that. Because culture consumption and income are not stable over time, we suppose that the results of the regression analyses will be biased by measurement error. We do not know how much they are biased, but we do know that the bias is in the negative direction, as is usually the case with attenuation.

An additional problem is that the bias for the effects of culture consumption may be stronger than the bias for the effects of income, because the elderly, weakened by age or illness, are less likely to leave their homes. In our sample, 48 percent of the parents in the older cohort never read serious books, 88 percent never visited libraries, 84 percent never visited theaters, 81 percent never visited museums, and 81 percent never visited historical buildings. For the younger cohort, these figures are 44 percent, 83 percent, 71 percent, 64 percent, and 69 percent, respectively. Thirty-eight percent of the older cohort and 29 percent of the younger cohort did not participate in any cultural activity. Although the younger parents are clearly more active, the differences are not big enough to support the argument that the culture consumption and reading habits of the elderly are largely a function of their health and mobility.

#### METHODS: THE BASELINE AND THE EXTENDED MODELS

To measure financial and cultural resources and to estimate the effects of these resources on children's educational attainment, I analyzed covariance matrices using linear structural relation models (Jöreskog and Sörbom 1978, 1979).

Figure 1 shows the model on which all analyses are based. The baseline model is a multi-indicators multi-causes or MIMIC model (Jöreskog and Goldberger 1975), in which both the independent variable and the dependent variable are unobserved. I chose this type of model because the number of regression coefficients that need to be discussed is reduced. Three indicators are used to predict SES: father's and mother's education and father's occupational prestige score. SES is the independent variable in all analyses. I assume that SES is completely predicted by parents' education and occupation, i.e., that there is no error variance in SES. The effects of the three background characteristics show the relative weights of the measured socioeconomic background variables on SES. The effect of father's educational attainment on SES has been set equal to one to identify the

Table 2. Means, Standard Deviations, and Zero-Order Correlations Among Variables for the Older Cohort (N = 317) and the Younger Cohort (N = 221)

	1	2	3	4	5	6	7	8	9	10	11	12	13	Mean	SD
1. Father's education <sup>a</sup>	—	.649	.549	.501	-.072	.157	.152	.353	.404	.183	.551	.502		2.339	1.886
2. Mother's education <sup>a</sup>	.764	—	.393	.368	-.079	.149	.183	.319	.254	.178	.489	.433		1.836	1.411
3. Father's occupation <sup>b</sup>	.536	.525	—	.483	-.062	-.004	.091	.457	.365	.154	.440	.400		42.175	19.703
4. Log family income <sup>c</sup>	.533	.369	.507	—	.062	.064	.035	.306	.157	.146	.345	.288		3.079	0.454
5. Number of siblings	-.054	-.105	-.014	.052	—	.096	-.071	-.078	-.015	-.053	-.046	-.027		4.407	2.022
6. Library visits per month	.211	.067	.089	-.004	-.079	—	.414	.185	.079	.175	.125	.138		6.538	16.126
7. Hours of serious reading per week	.211	.234	.184	-.094	.005	.312	—	.101	.130	.147	.220	.225		5.061	5.861
8. Theater visits per month	.561	.612	.436	.333	-.068	.047	.162	—	.391	.395	.247	.304		2.525	5.292
9. Museum visits per month	.410	.499	.328	.290	-.049	.059	.217	.609	—	.307	.254	.262		2.978	6.166
10. Historical building visits per month	.466	.444	.270	.299	-.003	.073	.246	.609	.671	—	.218	.202		2.646	6.036
11. Oldest sibling's education <sup>a</sup>	.620	.651	.561	.445	-.170	.201	.243	.448	.378	.302	—	.630		3.309	1.838
12. Second sibling's education <sup>a</sup>	.618	.493	.502	.460	-.190	.137	.212	.382	.283	.299	.681	—		3.222	1.723
13. Oldest sibling's age	1.770	1.452	36.929	2.746	4.244	3.729	5.014	1.573	1.719	1.708	2.368	2.394	48.520	33.492	3.573
Mean	1.685	1.313	18.521	0.373	2.297	12.074	6.300	5.271	5.750	5.678	1.697	1.573	5.845		
SD															

NOTE: Correlations for the older cohort are below the main diagonal, correlations for the younger cohort are above.

<sup>a</sup> The variable, indicating the highest level of schooling completed, was coded as follows: 1 = primary, 2 = low vocational, 3 = extended primary, 4 = middle vocational, 5 = grammar, 6 = high vocational, 7 = university (bachelor's degree), 8 = university (master's degree).

<sup>b</sup> Based on Sixma and Ultee's (1983) occupational prestige scores.

<sup>c</sup> In thousands of guilders per year.

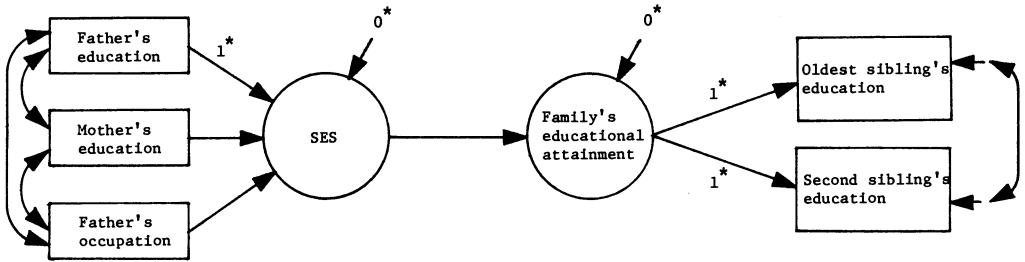


Figure 1. The baseline model. (The asterisk [\*] denotes a fixed parameter.)

model. Thus, SES is measured in units of education.

The dependent variables in all analyses are the educational attainments of the first and second siblings in a family. I assume that all regressions of the two dependent variables on the predictor variables give equal regression estimates for the two siblings. To achieve this estimation elegantly in a structural equation model, I constructed a latent criterion variable, family educational attainment, which has fixed effects of 1 on both siblings' educational levels. Thus, the dependent variable in all analyses is also measured in units of education. I assume that family educational attainment is predicted perfectly, i.e., that there is no error variance. Thus, I estimate a model in which all effects on the two criterion variables are assumed to be equal.

In addition, I model the error variances in individual sibling's educational attainments to be correlated. The educational attainments of siblings are much more alike than the educational attainments of two unrelated persons, even when background characteristics are controlled (Olneck 1977). Similarities in inherited traits, in opportuni-

ties, and in all sorts of cultural, social, and financial resources might be responsible for the correlated residual variances.

Figure 2 shows the model that estimates the impact of financial and cultural resources. All measures of financial and cultural resources—family income, number of siblings, family reading climate, and formal culture climate—are modeled to depend upon SES and to predict family educational attainment. Reading climate and formal culture climate have multiple indicators. All error variances of the four resource variables are modeled to be correlated, because I do not assume that their covariances are due only to a shared dependence upon SES.

The introduction of the intervening variables in the analyses can have three consequences in the regression analyses. First, it is possible that the effect of SES on family educational attainment will be reduced after the explaining variables are introduced. This is the prime target of the cultural transmission theory. This theory assumes that SES has a large effect on cultural resources and that cultural resources have a large effect on family educational attainment. Furthermore, this is ex-

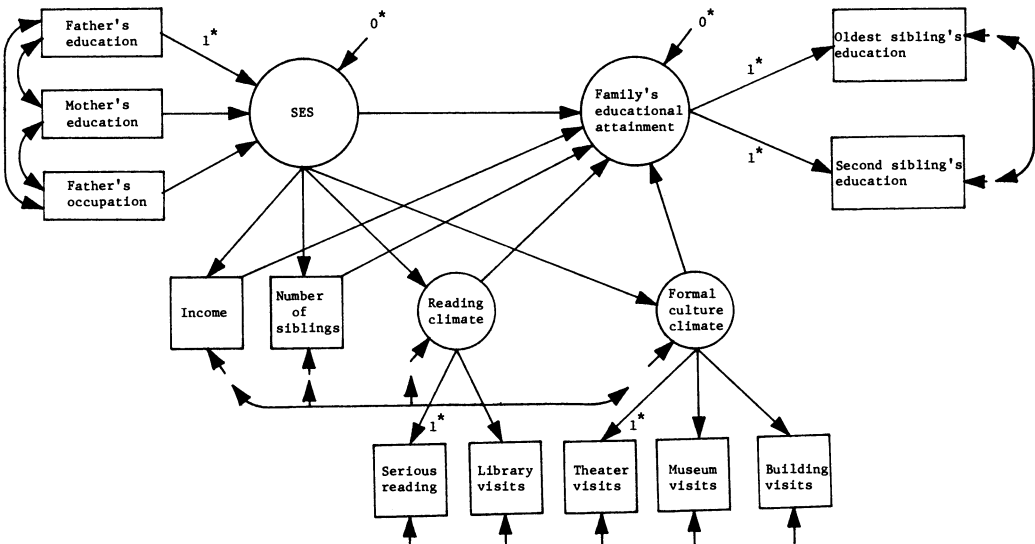


Figure 2. The extended model. (The asterisk [\*] denotes a fixed parameter.)



pected to be more true for the younger cohort than for the older cohort. The opposite is expected for financial resources. Family income and number of siblings are expected to have greater prediction power for the older cohort than for the younger cohort. Second, the proportion of explained variance of the siblings' educational attainments can increase. In this case, the new variables have their own effect, independent of SES. Third, the covariance of the two error variances of the siblings' educational attainments can decline. When this happens, the introduced variables have successfully measured the thus far unmeasured characteristics that siblings share.

All three things can happen simultaneously. I focus on the effect of SES on family educational attainment and give only secondary attention to the two other possible outcomes.

#### ANALYSES

##### *The Baseline Model*

First, I estimate the baseline model shown in Figure 1. Panel A of Table 3 shows the goodness-of-fit statistics and the degrees of freedom for some models for both cohorts, separately and simultaneously. Table 4 gives the estimated effects for the baseline model for both cohorts separately.

Models A1 and A2 represent the baseline models for both cohorts. The model fits the data extremely well for the younger cohort but poorly

Table 3. Goodness-of-Fit Statistics and Degrees of Freedom for Baseline and Extended Models and for Specifications and Comparisons of These Models

	$\chi^2$	df
Panel A: Baseline models		
A1. Older cohort	24.6	3
A2. Younger cohort	3.9	3
A3. Different parameter estimates for the two cohorts (A1 + A2)	28.5	6
A4. Equal parameter estimates for the two cohorts	75.0	18
A5. Different parameter estimates for the two cohorts; effects of SES on educational attainment equal for the two cohorts	28.8	7
Panel B: Extended models		
B1. Older cohort	119.4	40
B2. Younger cohort	69.2	40
B3. Different parameter estimates for the two cohorts (B2 + B4)	188.6	80
B4. Equal parameter estimates for the two cohorts	361.6	118
B5. Different parameter estimates for the two cohorts; all effects of SES, income, number of siblings, reading climate, and culture consumption equal for the two cohorts	210.4	89

Table 4. Parameter Estimates, Standard Errors, and Percentage of Variance Explained in Baseline Models for the Older and Younger Cohorts

	Older Cohort (N = 221)	Younger Cohort (N = 317)
Structural model		
Effect of father's education on SES <sup>a</sup>	1.00	1.00
Effect of mother's education on SES	.652 (.344)	.845 (.341)
Effect of father's occupation on SES	.665 (.207)	.548 (.212)
Effect of SES on educational attainment	.337 (.065)	.289 (.054)
Percentage of variance explained		
Oldest sibling's education	49.8	35.5
Second sibling's education	40.4	29.1

<sup>a</sup> Fixed parameter.

for the older cohort. However, residual covariances (not reported) do not show any specific pattern; therefore, I use these baseline models as the starting points for further analysis. (The main reason for the bad fit of the model for the older cohort is a positive residual for the covariance of mother's education with the oldest sibling's education and a negative residual for the covariance of mother's education with the second sibling's education.)

Model A3 shows that the two baseline models sum to a goodness-of-fit statistic of 28.5 with 6 degrees of freedom. Model A4 assumes the same parameter estimates for both cohorts. The difference between models A3 and A4 gives the significance of the difference between all parameter estimates. This difference shows a goodness-of-fit statistic of 46.5 with 12 degrees of freedom, which is highly significant.

The hypothesis of model A5, that the effects of SES on family educational attainment are equal for both cohorts, while there are different weights of the background characteristics on SES and while all modeled error variances and covariances are left free over cohorts, cannot be rejected. The difference between models A3 and A5 is only 0.3 with 1 degree of freedom. Therefore, we can conclude that the effects of SES on the younger cohort are not significantly different from the effects of SES on the older cohort. The basic assumption inspiring this research, that inequalities caused by parents' education and occupation have been stable over time, cannot be rejected.

The parameter estimates show the content of baseline models A1 and A2. The effect of SES on family educational attainment is .337 for the older cohort and .289 for the younger cohort. The difference between these two effects is not

significant, but the explanatory power of SES is larger for the older cohort than for the younger cohort. The proportion of explained variance for the older cohort is 50 percent for the oldest sibling and 40 percent for the second sibling; for the younger cohort these figures are 36 percent and 29 percent. The largest difference in parameters lies in the different effects of parents' socioeconomic characteristics on SES. When compared with the effect of father's education on SES, the effect of mother's education increases and the effect of father's occupation decreases.

The educational attainment of the oldest sibling is better predicted by SES than the educational attainment of the second sibling. The covariance of the error terms of the two siblings' educational attainments is substantial: 0.610 for the older cohort and 0.962 for the younger cohort. When the covariances are standardized (i.e., divided by the product of the two error variances), they display a correlation of .28 for the older cohort and .21 for the younger cohort. Parents' education and occupation indeed seem to be far from perfect indicators of all the advantages and disadvantages two siblings share.

#### *The Extended Model*

The extended model in Figure 2 provides tests of the hypotheses. Panel B of Table 3 presents goodness-of-fit statistics and degrees of freedom for several models. Table 5 shows the parameter estimates for the extended models for both cohorts.

Models B1 and B2 are the original extended models as given in Figure 2. This model does not fit the data for the older cohort. However, because residual variances and covariances (mainly residuals of covariances between single background characteristics and single indicators of reading climate and formal culture climate) have no discernable pattern and because the model is plausible, we stop looking for a better one.

Before going to the parameter estimates, the inequality of the extended models is tested. The two relevant models to compare are B3 and B4. Model B3 is the sum of models B1 and B2; it gives the sum of the two goodness-of-fit statistics and the sum of the degrees of freedom for these models. In model B4, all parameters are constrained to be equal across cohorts. The goodness-of-fit statistic is 361.6 with 118 degrees of freedom. The difference between models B3 and B4 is 173 with 38 degrees of freedom, and the hypothesis that all parameters of the extended models are equal across cohorts must be rejected.

Finally, model B5 tests whether all effects of SES and all effects on family educational attainment (nine effects altogether) are equal across the two cohorts. Because the difference between models B3 and B5 is 21.6 with 9 degrees of freedom, which is just at the borderline, we must

Table 5. Parameter Estimates, Standard Errors, and Percentage of Variance Explained in Extended Models for the Older and Younger Cohorts

	Older Cohort (N = 221)	Younger Cohort (N = 317)
<b>Structural model</b>		
Effect of father's education on SES <sup>a</sup>	1.00	1.00
Effect of mother's education on SES	.565 (.235)	.594 (.217)
Effect of father's occupation on SES	.598 (.141)	.749 (.173)
Effect of SES on family income	.688 (.112)	.713 (.107)
Effect of SES on number of siblings	-.045 (.051)	-.047 (.033)
Effect of SES on reading climate	.046 (.019)	.056 (.022)
Effect of SES on culture climate	.889 (.148)	.612 (.105)
Effect of SES on educational attainment	.280 (.052)	.244 (.043)
Effect of income on educational attainment	.085 (.026)	.003 (.019)
Effect of number of siblings on educational attainment	-.112 (.029)	.023 (.035)
Effect of reading climate on educational attainment	.574 (.241)	.305 (.112)
Effect of culture consumption on educational attainment	-.013 (.025)	.035 (.034)
<b>Measurement model</b>		
Effect of reading climate on library visits <sup>a</sup>	1.00	1.00
Effect of reading climate on serious reading	11.146 (3.641)	4.671 (1.256)
Effect of culture consumption on theater visits <sup>a</sup>	1.00	1.00
Effect of culture consumption on museum visits	1.082 (.094)	1.033 (.138)
Effect of culture consumption on historical building visits	1.070 (.093)	.829 (.124)
<b>Percentage of explained variance</b>		
Income	32.0	30.9
Number of siblings	0.4	0.7
Reading climate	9.4	4.8
Culture consumption	42.1	35.1
Oldest sibling's education	53.0	37.4
Second sibling's education	46.8	32.6

<sup>a</sup> Fixed parameter.

reject this hypothesis. This test is a very severe one, because 29 parameters are allowed to differ across the cohorts; therefore, we accept the thesis that changes have occurred.

The parameter estimates of the accepted extended models show that for the older cohort, introduction of the intervening variables reduces the direct effect of SES on family educational attainment from 0.337 to 0.280, which is only a small reduction. The proportion of variance explained for the oldest sibling rises from 49.8 percent to 53.0 percent, and for the second sibling from 40.4 percent to 46.8 percent.

Parameter estimates for the older cohort show that parents' income depends strongly upon SES and in turn has a direct effect on the siblings' educational attainment. Number of siblings is not significantly related to SES, but it has a direct effect on family educational attainment. Parents with more income and less children seem to provide better educational chances for their children than parents with less income or more children. Family income intervenes between SES and family educational attainment, but number of siblings does not. The reading climate of a family also depends upon SES and has a direct effect on educational attainment. Families with a better reading climate provide a more advantageous educational climate. The impact of participation in formal culture is nil. Although participation in formal culture is strongly affected by SES, it does not have an independent effect on family educational attainment.

So far, the outcomes of the analysis correspond to the hypotheses. In the older cohort, financial resources had an effect on educational attainment, and cultural resources had a partial effect. The results for the younger cohort will show whether changes have occurred during the last decades and thus whether or not the hypotheses must be rejected.

For the younger cohort, the introduction of the resource variables has an even smaller impact on the direct effect of SES on family educational attainment. The direct effect is reduced from 0.289 to 0.244. The proportion of unexplained variance of the oldest sibling's educational attainment rises from 35.5 percent to 37.4 percent, and the proportion of unexplained variance of the second sibling's attainment rises from 29.1 percent to 32.6 percent.

Again, family income depends upon SES, and number of siblings does not. For the younger cohort, neither family income nor number of siblings has a direct effect on family educational attainment. Reading climate and formal culture climate strongly depend upon SES; however, the direct effect of reading climate on family educational attainment is only half as large as the effect for the older cohort, and the direct effect of formal culture climate is still absent.

The covariance of the error variances of the two siblings' educational attainments has declined for both cohorts: For the older cohort the error covariance is 0.477 (0.610 for the baseline model),

and for the younger cohort the error covariance is 0.879 (0.962 for the baseline model). The errors have a correlation of .27 for the older cohort and .21 for the younger cohort. Together with parents' education and occupation, parents' income, number of siblings, and cultural resources do not measure much of all the advantages and disadvantages two siblings share.

Therefore, the hypothesis that the importance of financial resources has decreased is confirmed, and the hypothesis that the importance of cultural resources has increased is not. The influence of financial resources was felt by the older cohort but not by the younger cohort. The influence of a positive reading climate was present before 1950 and is only half as large for the cohort that entered secondary schooling after 1950. The impact of formal culture consumption is nil for both cohorts.

#### DISCUSSION

The results show that financial resources were an important determinant of educational attainment in the Netherlands before 1950. This has not been true since 1950, when social background is controlled for. The association between social background and educational attainment can no longer be attributed to the distribution of financial resources. Dutch governmental policy has successfully eliminated financial barriers to education. On the other hand, inequalities have remained. The direct effect of social background remains unchanged.

One kind of cultural resource, the reading climate in a family, played a more important role before 1950 than after 1950. The reading climate in a family depends upon social background, and it influences the family educational climate independently. Before 1950, the effect was twice as large.

Families who participated more in formal culture than other families did not provide a better educational climate for their children either before or after 1950, when social background has been controlled. High-SES children whose families consumed much formal culture did not perform better at school than high-SES children whose families did not consume much formal culture. Similarly, consumption of formal culture conferred no advantage on low-SES children. All resources together cannot explain much of the total effect of socioeconomic background.

Bourdieu's thesis that people who have attained high educational and occupational levels have their own status-group culture, in which especially formal culture is an important part of the leisure time activities, holds true. The correlation between social background and formal culture climate is .65 for the older cohort and .59 for the younger cohort, which clearly illustrates the strong relationship between educational and occupational characteristics and participation in formal culture.

However, the strong associations between formal culture climate and family educational attainment ( $r = .44$  for the older cohort and  $r = .41$  for the younger cohort), which Bourdieu so often uses to confirm his reproduction theory, are completely spurious. The social background variable predicts both the lifestyle and the educational attainment of the family. This has very serious negative implications for Bourdieu's theory.

A few concluding remarks must be made. This paper has attempted to explain the association between social background and educational attainment in only a global way. It is possible to elaborate the hypotheses. Cultural resources may be more important at some selection points in educational careers than at others. For instance, entrance into elite schools and entrance into medical school and law school could be such special selection points. Of course, there are other types of cultural resources, such as good manners, high-quality clothing, and knowledge of specific school curricula. Also, such social resources as having friends or family with influence or with the requisite financial or cultural resources can be an advantage in educational careers. Such elaborations are necessary to the development of an explanatory theory of the impact of cultural and other resources in the status attainment model.

The explanatory power of all financial and cultural resources in these analyses was small. Only when most of the direct effects of SES on the family climate can be explained by variables measuring resources and restrictions can we reach definite conclusions about the relative impact of the different types. As long as this has not been achieved, it makes little sense to define cultural resources as all those resources that are not family income.

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