FAMILY SOCIALIZATION AND EDUCATIONAL ATTAINMENT: EVIDENCE FROM A DUTCH COHORT

ROLF K.W. VAN DER VELDEN

Introduction

The relation between socio-economic background and educational attainment is perhaps one of the most stable in sociological research. The systematic disadvantage of pupils from lower social classes in achieving higher educational levels has been well documented (Hallinan, 1988; Dronkers, 1990), and occupies a prominent position on the public policy agenda. In most countries, this has given rise to large-scale programmes providing additional educational support for children from lower social classes. Despite these efforts, the overall relation between social status and educational attainment has remained rather stable over time (Peschar, 1989), although in the long run the effects seem to diminish (Hout, 1988, Ganzeboom & De Graaf, 1989). International comparisons show that there is little difference in this respect between countries, despite large differences in educational and social policy (Peschar, 1978; 1987).

The literature contains various explanations of the relation between socio-economic background and educational attainment. They pertain to very different mechanisms, ranging from genetically determined differences in intellectual abilities, differences in financial resources and differences in socialization patterns to differences in social resources. In this article, I focus on socialization patterns as the intermediary mechanism through which socio-economic status exerts its influence.

Two major ‘schools’ of research have developed in socialization research, one concentrated around the work of Kohn (Kohn, 1977; Kohn & Schooler, 1983) and one originating from Bourdieu’s theory of ‘cultural capital’ (1984). The basic assumption in the work of Kohn is that life conditions, and in particular job conditions, have a great impact on one’s values and orientations. The essence of the working life of the higher social strata is the opportunity to exercise occupational self-direction, i.e. to use initiative, thought and independent judgement. This fosters a view of self and society in which success is attributed to individual capacities and efforts and promotes the positive valuation of self-direction. The life conditions of the lower social strata, however, foster a more traditional, externally oriented view of social reality and promote the positive valuation of
conformity to authority. The feeling of being at the mercy of social powers which no influence can be exerted over and whose working is often not even clear is characteristic of people who perform simple routine work assigned to them by others. Conformity is the answer to life conditions in which there appears to be no room for self-direction. Obedience to superiors, interest in the extrinsic characteristics of one’s work, little confidence in others and a rigid attitude towards anything considered deviant characterize the self-image and orientation of the lower social strata. These ‘lessons of work’ are passed on to other aspects of life in a process of ‘learning generalization’, particularly to child-rearing. Parents train their children for the world as they see it. In bringing them up, they stress conformist values, if conformism appears to be important and necessary in their own lives, whereas self-direction is stressed if it is fostered by the parents’ own life conditions and work conditions. This theory has been confirmed, sometimes partially, by replication in several countries (Slomczynski et al. 1981; Naoi & Schooler, 1981). However, the effect of parents’ valuation of self-reliance on the educational career of their children has not yet been clearly demonstrated. The argument appears to be here that emphasizing self-direction and self-reliance means that children grow up in an environment which makes more demands on their intellectual flexibility and is more conducive to the development of analytical and problem-solving skills (Schooler, 1972; Kohn, 1977).

According to Bourdieu (Bourdieu & Passeron, 1977; Collins, 1979; Bourdieu, 1984; DiMaggio, 1982), cultural capital plays a dominant role in the persistence of status across generations. One central element in the reproduction process is what Bourdieu denotes as the habitus: the whole of linguistic and cultural competence and affinities mainly acquired in primary socialization. It involves differences in the use of language and language codes, aesthetic preferences, consumer patterns, recreation and attitudes towards education: in short the lifestyle characteristics by which the status groups differentiate themselves. Every status group has its own habitus. In order to be able to function in the educational system, familiarity with the culture of the dominant status groups is assumed. This primarily means familiarity with and appreciation of the ‘official’ culture, culture with a capital C (De Graaf, 1987). This form of capital, cultural capital, is acquired in early childhood. Socialization in the family in particular has a determining influence: that is where the foundations for the appreciation of certain artistic expressions are laid and where taste preferences are internalized. Schools cannot bridge such differences in cultural capital. On the contrary, the way schools transmit knowledge, the assumed codes and expected competences, enhance the differences that already exist. If one is to ‘feel at home’ in the official culture, the basis has to have been laid in the parental environment: it cannot be simply acquired along with the knowledge taught at school. The gap between school and home culture for children from the lower strata not only
means that knowledge is presented in a form they can not penetrate, it also implies the development of subtle forms of selection and self-selection, due to which these children drop out and leave school sooner. This is because they feel less confident in the higher and more prestigious types of education, and because teachers in their role as ‘gatekeepers’ have a certain preference for pupils from the higher strata (Rosenbaum, 1976; Jungbluth, 1984).

The two theories stress different aspects of socio-economic status as relevant. Kohn’s theory pertains to the working conditions as the driving force in the development of values. In particular, the extent to which one can exercise occupational self-direction determines the values one holds, which are in turn passed down to the children. Bourdieu’s theory on the other hand focuses on the cultural dimension of occupations or educational status. It is the lifestyle characteristics which differentiate between status groups and are acquired through socialization.

Furthermore, the two theories differ in the scope of their explanation. Kohn’s theory is solely related to what Boudon (1974) denotes as the primary effects of social stratification: the effect of social background on cognitive development. Bourdieu’s theory covers the primary as well as the secondary effects of social stratification: apart from the effect on school performance, it is also the effect on the choices made by pupils. In this article, the empirical explanatory power of the two theories is tested. The research questions are:

1. At which stages of the educational career does the socio-economic background exert its influence?
2. To what extent do the differences in the self-direction orientation of parents and the differences in cultural capital provide empirical explanations for the relation between social origin and educational status?
3. In which period in the educational career do these family characteristics exert their influence?

**Data and method**

In 1972 a group of researchers from the Department of Sociology at the University of Groningen launched a longitudinal study into the effects of social background on cognitive development (Meijnen, 1977; 1984). They decided to follow a sample of 728 children who were entering primary school in the city of Groningen. Each of them was given an intelligence test at the ages of 6, 9 and 12, and a school performance test at 9 and 12. In 1972 interviews were also held with the children’s mothers, and a questionnaire was left behind for the fathers. Information was gathered on social-structural variables such as education, occupation and family size as well as on the values and orientations of the parents towards education, society and child-rearing and on the parents’ cultural habits.
In 1975 and 1978 information about the schools attended by the children was gathered.

When the pupils were 18 years old (i.e. in the year 1984) they were approached again, this time by the Institute for Educational Research (Bosker, Hofman and Van der Velden 1985; Bosker 1990; Van der Velden, 1991). Detailed information about their secondary school career was obtained from the pupils themselves, and further information about family background and schools attended was again gathered by interviews with parents and school personnel. Compared to the situation in 1972, the 1984 survey had an experimental loss of 22%, due to non-response and non-availability (address unknown etc.). The present analysis will use data from the surveys of 1972 and 1984. Pupils who were referred to special schools have been left out, as have pupils for whom there was no information from the mother. A total of 519 complete sets of pupils and mothers remain. Some of these 519 sets contain data from fathers: in 450 cases from the 1972 survey and in 349 cases from the 1984 survey. The lower response of fathers, especially in 1984, is mainly due to refusals (18%) and divorce (9%).

Although the surveys from 1972 and 1984 had different emphases, information concerning the parents’ orientation towards self-direction was gathered both times, as was information concerning the parents’ cultural habits. The variables selected for the present analyses refer to four different aspects: social status of the family, educational career of the pupil, orientation of the parents towards self-direction, and the family’s cultural capital.

The first set of variables indicates the social status of the family. Information was gathered about the educational level and occupational prestige of the parents. The parents’ level of education was coded into a 6-point scale, ranging from 1 (elementary school only) to 6 (higher education). The occupational prestige of the parents was also coded in a 6-point scale, ranging from 1 (unskilled labour) to 6 (academic professions). Both variables were shown to be of a near interval nature in relation to the dependent variable (Meijnen, 1977). A factor analysis showed that one common factor could be constructed (STATUS), with roughly equal loadings of the four variables (Meijnen, 1977). It was then decided to use a composite score of the four variables, defined as the mean score and rounded up to an integer between 1 and 6.

The second set of variables relates to the educational career of the children. The variables here concern the differences in intelligence at the start of primary school, measured by four different intelligence tests, the educational position at the end of primary school and the educational status at the age of 17. The intelligence test is the Dutch translation of the Primary Mental Abilities (PMA) test designed by Thurstone and Thurstone (1962). It consists of four subtests, representing verbal, perception, numerical and spatial abilities. The tests were administered at the age of 6, when the students entered primary school. The measurement of the educational status needs some explanation. The Dutch
educational system is highly differentiated, vertically as well as horizontally. After one (sometimes two) common year at secondary school, students choose from five main types of secondary school: Individual Preparatory Vocational School (IVBO: 4 years), Preparatory Vocational School (VBO: 4 years), Junior General Secondary School (MAVO: 4 years), Senior General Secondary School (HAVO: 5 years) and Pre-University School (VWO: 6 years). Only the VWO diploma gives access to the university. Within a type of secondary school, the curriculum is organised according to the year group system, which means that it takes a minimum of 4, 5 or 6 years to get the diploma. Each year, students have to pass exams or tests to go on to the next grade. Failing to pass the tests means they have to repeat a year. Within a type of school, the educational status of a student is therefore unambiguously defined by the grade that has been completed. Having passed the second grade at VWO (VWO-2) means a student is still four years from getting the diploma (i.e. passing the 6th grade at VWO). The differences between types of secondary school can also be expressed in terms of years. As a rule, it takes a student an extra year to proceed from one type of school to the higher type of school. A student with a VBO diploma (i.e. passes VBO-4) can proceed to MAVO-4, with a MAVO diploma he or she can proceed to HAVO-4, and with a HAVO diploma to VWO-5.

This means the Dutch secondary school system can be viewed as five parallel ladders, where the rungs represent the grades and switching to a higher ladder takes an extra year. The educational status of a student can therefore be defined by the type of secondary school and the grade that has been completed. In the appendix the construction of this educational status ladder is elaborated upon. The top of this ladder consists of the last grade of VWO (VWO-6) and the bottom the first grade of IVBO. Using this ladder, two variables can be constructed, one representing the educational status at the end of primary school (PRIMPOS) and one representing the educational status at the age of 17, when the last survey was held (ENDPOS). In the construction of PRIMPOS we use the ladder’s score belonging to the type of school the pupil was advised to attend by the teacher at the end of primary school. This advice is mainly based on national academic achievement tests and determines to a large extent the placement of students at the different types of secondary school. The score for the teacher’s advice is then adjusted by subtracting the number of years the student was left back at primary school. The variable ENDPOS is defined as the educational status score belonging to the position held at the age of 17 or the highest level reached at secondary school if the pupil has dropped out.

The third set of variables pertains to the parents’ valuation of self-direction. Three variables refer to this dimension. The first concerns the ‘parental child-rearing values’ and is derived from Kohn (1972). The parents were presented with ten child-rearing values. Five of them stress self-direction. The other five relate to conformity values. The task was to select the three most and the three
least important ones. Both parents were asked in 1972 as well as in 1984. A high score indicates a strong valuation of self-direction. The second variable is a scale for 'social orientation', again for both parents, in 1972 and in 1984. A high score indicates an open, non-conformist view of society. The third variable represents the 'role structure' between the mother and child and was operationalized by means of questions on the nature of a) role prescriptions, b) sanctions, c) verbal interaction and d) independence training. A high score indicates a personal role structure, a low one indicates a positional role structure.

The fourth set of variables concerns the cultural capital in the family. The 'reading behaviour of the parents' was examined, in 1972 and 1984. The scale is made up of items that indicate whether the respondents subscribed to newspapers and weekly magazines, and how much time they generally spent reading books and newspapers. A high score indicates a strong reading orientation. The variable 'cultural pedagogic level' indicates the extent to which parents stimulate the cognitive development of their children. It deals with matters such as reading to them, teaching them songs, correcting their word use or buying books for them. This cultural pedagogic level was determined for the father as well as the mother, but only in 1972. A high score indicates a high cultural pedagogic level. The variable 'understanding of the educational system' indicates the extent to which parents are informed about the standards and the written and unwritten rules of the educational system. The items on this scale were only presented to the mothers in the 1984 survey. A high score indicates a good understanding. A closely related indicator is 'nearness to the educational field'. The parents were asked in the 1984 survey whether they had acquaintances who worked in education, or whether they themselves had worked or were working in education. It was assumed that the closer one is to the educational system, the more familiar one is with the prevailing standards and rules. Finally, there are two variables that relate to parents' involvement in the educational careers of their children. For the first variable, 'knowledge of the subjects chosen', the mother was asked to name the subjects her son or daughter was taking at school. In addition, the parents were asked how much information they gathered when the choice of subjects was being made.

The scales that were developed were all submitted to reliability analyses, using either internal consistency measures (alpha) in the case of Likert scales or the homogeneity coefficient H in the case of a Mokken scale. The level of acceptance was .75 (alpha) or .30 (H-coefficient). All the scales presented here passed this level of acceptance. For further details on the variables, I would like to refer to Meijnen (1977) or Bosker, Hofman and Van der Velden (1985b).

The analyses were carried out with LISREL VI (Jöreskog and Sörbom, 1986) using maximum likelihood estimation, applied to covariance matrices with a list-wise deletion of missing values. Several models (K=1,2.....g) were compared and the likelihood ratio goodness-of-fit statistic was used as an indication
of which model best approximated the data. A major problem finding the best fitting model this way is that no information is accessible about the stability of the chosen model, nor is it clear to what extent chance capitalization has occurred. I therefore opted for a strategy of double cross-validation, as was suggested by Cudeck and Browne (1983). I split my sample randomly in two equal halves, a and b. Sample a was used as a calibration sample. The different models \( (K=1,2,\ldots,g) \) were developed using this sample. These models were then cross-validated on sample b, the validation sample. The cross-validation index \( F(S_b;\hat{\Sigma}_{k\alpha}) \) is a measure of the discrepancy between the covariance matrix for the validation sample \( (S_b) \) and the reproduced covariance matrix for the calibration sample \( (\hat{\Sigma}_{k\alpha}) \), where \( k \) is the model under consideration. This results in a set of \( g \) cross-validation indices. This procedure was repeated by calculating for each model \( K \) the cross-validation index \( F(S_b;\hat{\Sigma}_{k\alpha}) \). This results in a second set of cross-validation indices (double cross-validation). If the same model yields the lowest cross-validation index in each set, then we may be confident that this model has the greatest predictive validity for the given sample size. All the models presented were analyzed this way and could all be uniquely identified.

**Selection processes in the educational career**

The first research question was: At which stages of the educational career does social status exert its influence? Status effects in a given period may partly result from status effects in an earlier period. In order to separate direct from indirect status effects (i.e. due to a status effect at a former stage in the educational career), I constructed a longitudinal model. The various stages and positions in the educational career are therefore depicted on a time axis. I used a latent variable INTELL, indicated by the four IQ subtests IQ1 to IQ4, to mark the differences in intelligence already apparent at the start of primary school (age 6). The variable PRIMPOS marks the educational status reached at the end of primary school and the variable ENDPOS represents the educational status reached at age 17. As exogenous variable, I used the variable STATUS, a composite score of the educational level and occupational prestige of both parents in 1972.

The estimates for the measurement model of INTELL are presented in Table 1. In this model, no correlation of error terms is allowed. The coefficient of determination indicates a rather reliable instrument. The overall fit \( (\chi^2=14.0; \text{d.f.}=2) \) is not very good, but can be improved significantly by introducing correlated measurement errors on IQ1-IQ3 and IQ2-IQ4. As these two pairs represent verbal and non-verbal intelligence, this modification seems to be justified. I therefore accepted this model with the modification as representing intelligence.

The next step in the analysis was the development of a longitudinal model to assess the direct and indirect effects of STATUS at the different stages of the
Table 1: Measurement model INTELL (n=519)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Lambda</th>
<th>Standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. IQ1: verbal subtest</td>
<td>1.00</td>
<td>—</td>
</tr>
<tr>
<td>2. IQ2: perception subtest</td>
<td>1.18</td>
<td>.11</td>
</tr>
<tr>
<td>3. IQ3: numerical subtest</td>
<td>1.40</td>
<td>.10</td>
</tr>
<tr>
<td>4. IQ4: spatial subtest</td>
<td>1.11</td>
<td>.09</td>
</tr>
</tbody>
</table>

Modification: 10 $\chi^2$-points correlation 1-3 and .10 $\chi^2$-points correlation 2-4

Coefficient of determination = .79
$\chi^2$ = 14.0 d.f. = 2 p = .001

educational career. As was noted above, I used the first half of the sample to develop the different models. The models that had an acceptable fit were then double cross-validated. Figure 1 presents the resulting model based on this procedure.

Figure 1: Longitudinal model

$\chi^2 = 14.3; \text{ d.f.}=9; p=.11$
All the effects were significant at the .05 level. The model shows that 49% to 57% of the variance in educational status at the end of primary school and at the age of 17 could be ‘explained’ in terms of the variables incorporated in the model. As the educational career developed, the direct effect of social status became weaker: from .28 for the period at primary school to .15 for the period at secondary school.

The total (direct and indirect) standardized effect of STATUS on the educational status at the age of 17 (ENDPOS) was .52. Of this total effect, .37 was indirect (due to earlier positions) and .15 was direct. The total effect of STATUS on the educational status at the end of primary school (PRIMPOS) was .53, of which .28 was direct and .25 was indirect. The total effect of STATUS on intelligence at the age of 6 (INTELL) was .48. I can also express these figures in a different way. If I set the total effect of social status on the achieved educational status at the age of 17 at 100%, 30% (= .15/.52 * 100%) of this effect was due to selection processes at secondary school, 29% was due to selection processes at primary school, and 41% to pre-school differences. These results indicate that the contribution of early cognitive development to later academic success is rather substantial. However, the larger part of the status-related differences in educational careers should be attributed to factors and processes which occur after starting school. This cumulation of the status effect with age is indicative of an explanation in terms of different socialization patterns. In the next section, I analyse whether these effects of social stratification can be ‘explained’ to some extent by differences in the orientation of parents to self-direction or by differences in the family’s cultural capital.

A family model

The next step in the analysis was the introduction of family characteristics into the longitudinal model, and more specifically of variables that refer to the valuation of self-direction versus conformity and to cultural habits. I will first present the measurement models for the valuation of self-direction separately for mothers and fathers. In measuring the mothers’ orientation to self-direction, I started with a model allowing for a correlation of the error terms of the same indicators over time. The results of this model are presented in Table 2. The total coefficient of determination is rather good (.80), indicating a rather reliable instrument. The overall fit is very good. No major modifications are indicated. I therefore accepted this model as representing the mothers’ orientation to self-direction.

The estimates of the measurement model for the fathers are presented in Table 3. In this model I do not allow for the correlation of error terms due to the lack of degrees of freedom. The overall fit of the model for the fathers is rather poor ($\chi^2=7.1; \text{d.f.}=2$), but it can be significantly improved by allowing the error terms
Table 2: Measurement model 'self-direction mother' (n=503)

Correlated measurement errors: 1-2; 3-4

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Lambda</th>
<th>Standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Parental values 1972</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>2. Parental values 1984</td>
<td>.73</td>
<td>.06</td>
</tr>
<tr>
<td>3. Social orientation 1972</td>
<td>.73</td>
<td>.07</td>
</tr>
<tr>
<td>4. Social orientation 1984</td>
<td>5.79</td>
<td>.50</td>
</tr>
<tr>
<td>5. Role structure</td>
<td>5.28</td>
<td>.42</td>
</tr>
</tbody>
</table>

No significant modifications

Coefficient of determination = .80
\[ \chi^2 = 1.5 \text{ d.f.} = 3 \text{ p} = .69 \]

Table 3: Measurement model 'self-direction father' (n=305)

No correlation of measurement errors

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Lambda</th>
<th>Standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Parental values 1972</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>2. Parental values 1984</td>
<td>.90</td>
<td>.14</td>
</tr>
<tr>
<td>3. Social orientation 1972</td>
<td>.89</td>
<td>.15</td>
</tr>
<tr>
<td>4. Social orientation 1984</td>
<td>6.66</td>
<td>1.06</td>
</tr>
</tbody>
</table>

Modifications: 5.4 \( \chi^2 \)-points correlation 1-2 and 5.4 \( \chi^2 \)-points correlation 3-4

Coefficient of determination = .67
\[ \chi^2 = 7.1 \text{ d.f.} = 2 \text{ p} = .03 \]

of the same indicators to correlate over time. The total coefficient of determination (\( .67 \)) was lower than for the mothers. This difference is perhaps due to the fact that information about the fathers was gathered using a questionnaire instead of an interview. Despite this lower reliability, I will use the model as a representation of the fathers' orientation to self-direction, although we should be aware that, as a result of the low reliability, effects of the fathers' self-direction may prove to be not significant.

The measurement model for cultural capital comprises eight indicators (Table 4). In the model, correlation was assumed between measurement errors for the reading behaviour in 1972 and 1984 and between the cultural pedagogic level of the mother and that of the father. The coefficient of determination and the model fit are reasonable. The model fit could be improved by also assuming correlated
Table 4: Measurement model 'cultural capital' (n=473)

Correlated measurement errors: 1-2, 5-6

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Lambda</th>
<th>Standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Reading behaviour 1972</td>
<td>1.00</td>
<td>–</td>
</tr>
<tr>
<td>2. Reading behaviour 1984</td>
<td>1.09</td>
<td>.11</td>
</tr>
<tr>
<td>3. Understanding of education</td>
<td>5.75</td>
<td>.74</td>
</tr>
<tr>
<td>4. Neatness to education</td>
<td>.43</td>
<td>.06</td>
</tr>
<tr>
<td>5. Cult. ped. level mother</td>
<td>3.19</td>
<td>.41</td>
</tr>
<tr>
<td>6. Cult. ped. level father</td>
<td>.21</td>
<td>.08</td>
</tr>
<tr>
<td>7. Information on choice of subjects</td>
<td>.22</td>
<td>.07</td>
</tr>
<tr>
<td>8. Knowledge of the subjects</td>
<td>.65</td>
<td>.09</td>
</tr>
</tbody>
</table>

modifications: 6.5 $\chi^2$-points correlation 5-7;
6.0 $\chi^2$-points correlation 4-7 and
5.5 $\chi^2$-points correlation 1-6

Coefficient of determination = .70
$\chi^2 = 25.2$, df = 18, p = .12

measurement errors between certain other variables. However, since no theoretical justification can be found for this, these modifications were not adopted. The model as it is presented here was accepted for the coming analyses.

The next step in the analysis is to introduce these latent constructs in the longitudinal model developed in section 3. I decided to develop separate family models for each of these constructs. The main reason to do so was an empirical one. Models with all three latent family constructs simultaneously analysed proved to be unstable, partly as a result of multicollinearity. It was not possible to develop a stable model with an acceptable model fit. Although a direct confrontation between the cultural capital thesis and the occupational self-direction thesis in one model might seem attractive, one should also bear in mind that there is no theoretical justification for a model in which the two concepts are incorporated. It therefore seems justified to compare the explanatory power of these two concepts using separate models.

In Figures 2 to 4, the parameter estimates of the structural family models are given. All three of these models were created using double cross-validation, as described above. The corresponding table, Table 5, shows how great the total (direct plus indirect) status effect was on the different career variables and what part of it was mediated by family characteristics.

The degree to which the different models fit the data varies considerably. The model with the self-direction orientation of the mothers appears to fit the data quite well ($\chi^2 = 49.7$; df = 43). The other two models appear to fit the data reasonably well, considering the relation between the chi$^2$ value and the number
Figure 2: Self-direction mother

\[ \chi^2 = 49.7; \ df = 43; \ p = .22 \]

Figure 3: Self-direction father

\[ \chi^2 = 43.9; \ df = 33; \ p = .10 \]
Table 5: Effect of STATUS and the mediating role of family characteristics

<table>
<thead>
<tr>
<th>Status effect</th>
<th>Self-direction mother</th>
<th>Self-direction father</th>
<th>Cultural capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total effect STATUS on ENDPOS mediated via family characteristic</td>
<td>.51</td>
<td>.46</td>
<td>.50</td>
</tr>
<tr>
<td>effect STATUS at secondary school mediated via family characteristic</td>
<td>.14 (negative)</td>
<td>.12 (10%)</td>
<td>.17 (50%)</td>
</tr>
<tr>
<td>effect STATUS at primary school mediated via family characteristic</td>
<td>.29 (16%)</td>
<td>.30 (52%)</td>
<td>.30 (100%)</td>
</tr>
<tr>
<td>effect STATUS pre-school mediated via family characteristic</td>
<td>.47 (44%)</td>
<td>.37 (39%)</td>
<td>.45 (79%)</td>
</tr>
</tbody>
</table>

of degrees of freedom. In comparing the ‘fathers’ self-direction’ with the other models, one has to bear the difference in the sample size in mind.

The effect of social status on the latent variable ‘cultural capital’ was very strong (.85). This means the cultural capital of a family is determined to a considerable extent by the social position of the parents, at least in a model where
the educational career of the children is explored. For the other models, the effect of social status on the latent variables was also rather strong: .64 for ‘mothers’ self-direction’ and .69 for ‘fathers’ self-direction’.

The relations between the various career variables hardly differ between the 3 models and agree reasonably well with the estimates from the longitudinal model in the previous section. In all the models, intelligence at the age of 6 (INTELL) had a strong effect on the educational status at the end of primary school (PRIMPOS), which in turn strongly determined the educational status at age 17 (ENDPOS). Weak direct effects were found between INTELL and ENDPOS.

What did differ was the intermediating role of family characteristics. Cultural capital appears to have a strong effect on the educational career, in particular on the first two career variables of intelligence (.42) and educational status at the end of primary school (.48). For the other two models, the effects of family characteristics are much weaker. The mothers’ orientation to self-direction has a strong effect on the intelligence (.33), whereas its effects on the other two career variables do not significantly deviate from zero (t-value < 1.96). The fathers’ orientation to self-direction only has a significant effect on the educational status attained at the end of primary school (.22). Because of the differences in the intermediating role of the family characteristics, the direct effects of social status on the career variables also vary, being smallest in the cultural capital model and greatest in the model with the mothers’ orientation to self-direction. The intermediating effect of cultural capital is thus demonstrable in every career period, whereas self-direction values only have a positive effect at certain moments in the career.

The unexplained variance in the different career variables hardly varies between the three models and does not deviate substantially from the unexplained variance found in the model without family characteristics from the last section. This indicates that the family characteristics do mediate part of the status effect, but do not have an ‘additional’ explanatory value. They therefore do not contribute to a better prediction of the educational career, but they do indicate the processes the status effects work through. The extent to which the family characteristics mediate the status effect does vary however (see Table 5). Cultural capital appears to mediate 87% of the total status effect. If the effect of social status on the separate career periods is contemplated, the differences in cultural capital explain 50% of the status effect on the career at secondary school, the whole status effect on the career at primary school, and 79% of the status effect on the intelligence at age 6. The mediating role of orientations to self-direction is much lower. Differences in the mothers’ orientation to self-direction explain only 19% of the total effect of status on the educational career. A strong orientation to self-direction of the mother appears to be only relevant in the pre-school period, where it explains 44% of the status effect. The mediating role of the fathers’ orientation to self-direction appears to be larger, mediating a total
of 36% of the status effect (some caution in interpretation is called for because of the different sample sizes). A strong orientation to self-direction on the part of the father explains 52% of the status effect on the primary school career and 39% of the status effect on the pre-school period.

Conclusions

The influence of social background on a child’s career is quite large and manifests itself at various stages. If we set the total effect of socio-economic background on the educational status at the age of 17 at 100%, one could say that 30% of this effect is due to selection processes at secondary school, 29% is due to selection processes at primary school, and 41% must be attributed to pre-school differences. These results indicate that the contribution of cognitive development in early childhood to later academic success is quite large. Most of the status-related differences in educational careers must however be attributed to factors and processes that occur after entering school.

One might argue that the effects of pre-school differences have perhaps been underestimated due to measurement errors in the intelligence test. Other studies generally note higher effects of intelligence on educational attainment (Sewell, Hauser and Wolf, 1980; Dronkers, 1990). However, in most cases intelligence tests used in educational research were administered at age 12 or later and can therefore hardly distinguish between cognitive development before and after entering primary school. Two arguments may underlie our finding that pre-school differences are substantial, but that most status-related differences in the educational career are related to factors and processes that occur after entering primary school. First, measurement errors have explicitly been taken into account in the LISREL model. Second, substantial direct effects of socio-economic background have been observed on the student’s career at secondary school. Here the measurement errors hardly play a role. It seems therefore plausible that the same effects are to be found at primary school.

The cumulative effect of social background on educational careers strongly supports an explanation of unequal educational opportunity in terms of socialization differences. In this article, the empirical explanatory power of two main theories in this field, Kohn’s theory of self-direction (Kohn, 1972) and Bourdieu’s theory of cultural capital (Bourdieu, 1984) are closely examined. The analyses show that the self-direction orientation of the parents only explains a part of the status effect. Less than half the status effect in the pre-school period appears to be related to the self-direction orientation of the parents, whereas about half the status effect on the career at primary school appears to be related to the self-direction orientation of the father. Differences in cultural capital provide a better explanation for the relation between social status and educational career. This is particularly applicable to the effects of social status in the
pre-school and primary school period. Differences in cultural capital were seen to relate to only half the status effect on the career at secondary school.

One might argue that the greater explanatory power of the cultural capital concept results from a confounding effect with the concept of social status. The large effects of social status on cultural capital seem to point in that direction. To a lesser extent, this could also apply to the intermediary role of the parents’ self-direction orientation. Conceptually, however, the two types of concepts (status and cultural capital/self-direction) are clearly different, notwithstanding their empirical relation. Whereas the social status variable measures the status people have in society on the basis of their occupation and level of education, the other two concepts refer to values, norms, behaviour or habits which are assumed to be associated with particular status groups or occupational conditions.

One reason why the latent construct of cultural capital is more closely related to social status than the fathers’ or mothers’ self-direction orientation is that social status is constructed as a composite score of the occupational and the educational status of the parents. As most of the mothers in the sample have no occupation, this composite score weighs heavily on the educational attainment of the parents. Moreover, research on the effects of the educational and occupational status of parents on the school careers of their offspring shows that the effects of parents’ educational status far outweigh the effects of the fathers’ or mothers’ occupational status (Dronkers, 1990; Van der Velden, 1991). It therefore seems plausible that a concept like cultural capital, which is theoretically more closely linked to educational status and the cultural dimension of occupations, exhibits a stronger link with the social status variable measured in this analysis than the fathers’, or mothers’ orientation to self-direction, which find their theoretical roots in characteristics of the occupations.

If we consider the status effect on the career at secondary school as mainly a secondary effect of social stratification (Boudon, 1974), then differences in cultural capital can be said to explain the larger part of the primary effects and part of the secondary effects. Thus social inequality in educational opportunities appears to relate primarily to differences in cultural capital. It is not attitudes to self-direction but differences in habitus which lie at the basis of status-specific selection in education. Still, this is only part of the story. It is true that differences in cultural capital appear to mediate the status effect well, but they do not add anything extra. The total explained variance in the educational status appears to be just as great in the extended family model as in the limited longitudinal model. Moreover, the status effect at secondary school is only partly determined by differences in cultural capital. Apparently other factors, such as social resources, also play a role. In future research, these other factors will have to receive more attention.
Appendix: Construction of the educational status ladder

To construct the educational status ladder, the following decisions were made (Van der Velden, 1991):

1. The top of the ladder is defined as successfully completing the 6th grade of Pre-University School (VWO).
2. Within Preparatory Vocational School (VBO), a distinction is drawn between the lower level A/B and individualised tracks (IVBO) and the higher level C track. The difference is defined as one year. This closely parallels the educational practice, where it takes students about one year to improve their level from A/B to C. Individual Preparatory Vocational School (IVBO) can be attended directly after leaving primary school, and the distinction between the A/B and C track is particularly relevant in the last two years of school.
3. The courses given in the further education system were linked as follows. Assuming the standard admission requirements, we defined University Education (WO) as the follow-up of VWO, Higher Vocational School (HBO) as the follow-up of Senior General Secondary School (HAVO), the 3 and 4 year courses at Senior Secondary Vocational School (MBO) as the follow-up of Junior General Secondary School (MAVO), the 1 and 2 year courses at Senior Secondary Vocational School (MBO) as the follow-up of VBO (C-track), and Short Senior Secondary Vocational Courses (KMBO) and apprenticeship training (BBO) as the follow-up of VBO (A/B-track) or Individual Preparatory Vocational School (IVBO). Note that the student who proceeds from VBO (C-track) to the 3 or 4 year courses in MBO ‘gains’ one year.

NOTES

1. Kreft (1993) used an a posteriori approach to quantify the educational careers of Dutch students. In Van der Velden (1991), I argued that the multiple correspondence technique used by Kreft and others had two major drawbacks. Firstly, the outcomes are dependent on characteristics of the specific sample and are therefore not comparable between datasets. Secondly, the technique introduces a systematic bias towards people with a successful career. Therefore the a priori approach like the one presented here is preferred.
2. I use the teachers’ advice instead of the actual choice of secondary school, because formal placement at a type of secondary school takes place after a transition period of one or two years. In practice however, at most schools some sort of streaming or tracking takes place in this transition period. This pre-tracking is often based on the teachers’ advice at primary school and test results in the first year of secondary school.
3. The only exception might be the one indicator relating to ‘nearness to education’. However this indicator only constitutes one out of the eight indicators constructing the latent variable cultural capital.
Figure 5: Educational status ladder

<table>
<thead>
<tr>
<th>Top</th>
<th>Educational status</th>
</tr>
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<tbody>
<tr>
<td>12</td>
<td>VWO-6</td>
</tr>
<tr>
<td>11</td>
<td>VWO-5</td>
</tr>
<tr>
<td>10</td>
<td>VWO-4</td>
</tr>
<tr>
<td>9</td>
<td>VWO-3</td>
</tr>
<tr>
<td>8</td>
<td>VWO-2</td>
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<tr>
<td>7</td>
<td>VWO-1</td>
</tr>
<tr>
<td>6</td>
<td>VWO-0</td>
</tr>
<tr>
<td>5</td>
<td>HAVO-0</td>
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<tr>
<td>4</td>
<td>MAVO-0</td>
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<tr>
<td>3</td>
<td></td>
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<tr>
<td>2</td>
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<tr>
<td>0</td>
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<td>Bottom</td>
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</tr>
</tbody>
</table>

where:
VWO-6 refers to 6th grade VWO completed
VWO-0 refers to 1st grade VWO not completed or ‘advice teacher VWO’
MBO* refers to 1 and 2 year courses in MBO
MBO refers to 3 and 4 year courses in MBO

REFERENCES


