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# Parental media socialization and educational attainment: Resource or disadvantage?

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## Abstract

This article analyzes the long-term effects of parental media socialization on children's educational attainment. Data on 8316 individuals from 3257 families in the Netherlands is used to estimate hierarchical models that distinguish between family-specific (socialization) and individual-level effects. The study reveals that parental reading and television socialization plays a meaningful role in predicting children's success in education. Whereas parental time spent viewing television is disadvantageous for a child's educational career, parental reading intensity enhances educational success. Moreover, not only does media exposure play a relevant role, the content of parental media consumption also matters. Parents who prefer highbrow literature benefit their children's educational career, whereas a preference for watching popular TV programs is disadvantageous for a child's educational success. Next to the parental example of media consumption, media guidance provided by parents is scrutinized. Results indicate that parent-child interactions on reading positively affect children's educational attainment.

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**Keywords:** Parental media socialization; Educational attainment; Family background; Cultural resources; Multilevel analysis

## 1. Introduction

In this study we investigate the extent to which parental television and reading socialization activities affect their children's educational attainment. Most research on television consumption indicates that television exposure harms children's academic performance and overall well-being (Hancox, Barry, Milne, & Poulton, 2005; Valkenburg, Cantor, & Peeters, 2001). Some studies however report positive effects of cer-

tain TV behavior on children's cognitive and linguistic skills (Gentzkow & Shapiro, 2006; Wright et al., 2001). Parents are generally presumed to play a decisive role in teaching children how to deal with television's attractions (Sharif & Sargent, 2006). Parents provide an example by way of their own television viewing behavior, and they also guide their children's television viewing, for instance, by giving instructions or by covieing. Comparable research on reading socialization shows that in-home promotion of children's literacy skills is an overall positive factor in a child's educational career (Bus, Van IJzendoorn, & Pelligrini, 1995; De Graaf, De Graaf, & Kraaykamp, 2000). Parents may influence and shape their children's reading behavior by setting an example, via their own reading practices and by actively stimulating a child's reading habits.

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Social stratification research often focuses on how parental resources and socialization activities affect children's educational success. One dominant and persistent predictor of educational achievement is referred to as parental cultural capital (Bourdieu & Passeron, 1977; DiMaggio, 1982). When it comes to parental cultural assets and the intergenerational transmission of these family-specific resources, an often-tested and corroborated presumption is Bourdieu's cultural reproduction hypothesis. From this idea it follows that in highbrow families certain parental cultural dispositions benefit children's educational success, whereas a lack of these highbrow cultural resources in lower class families hinders children's educational progress (De Graaf, 1986; Kalmijn & Kraaykamp, 1996).

Although all parents' cultural behaviors and preferences are presumed to play an important role in the cultural reproduction process, research so far has largely focused on parental highbrow cultural behaviors, like visiting art exhibitions, the theater and classical concerts. With some relevant exceptions (Crook, 1997; De Graaf, 1986; De Graaf, De Graaf, & Kraaykamp, 2000; Lareau, 2003; Sullivan, 2001), studies on the effects of cultural capital often disregard possible effects of media-related cultural practices *within* the parental home, especially regarding television viewing. Nonetheless, media behavior at home is a recurrent and salient cultural activity. Therefore, when it comes to a child's educational career, parental media activities are likely to have a larger effect than the less frequent parental highbrow cultural outings. By studying parental media socialization activities, we expect to shed a somewhat different light on the process of cultural reproduction in education. Our general research question reads as follows: *To what extent do parental media socialization activities affect children's educational attainment?*

Our research may be regarded as innovative for several reasons. First, we hypothesize that parental highbrow media socialization (e.g. reading literature) enhances a child's educational attainment, whereas parental lowbrow media activities (e.g. excessive television viewing) may harm a child's educational career. We thus distinguish within the overall notion of cultural capital between "beneficial" and "disadvantageous" resources and activities. Second, we study socialization activities through the example set by parents at home (parents' own media behavior) and by means of parent-child interactions on media consumption (parental media guidance). Third, previous research on the effects of media socialization activities, especially in communication studies, deals mainly with children still living within the parental home. Here we focus on long-term

effects of parental media socialization. We study individuals born between 1955 and 1978 who no longer live with their parents. Hence, socialization may be assumed to be completed for these persons. Fourth, we apply multilevel modeling to Dutch sibling data, which enables us to distinguish between family-level socialization effects and individual-level effects. Using data from three waves of the Family Survey Dutch Population, we analyze 8316 individuals from 3257 families (De Graaf, De Graaf, Kraaykamp, & Ultee, 1998; De Graaf, De Graaf, Kraaykamp, & Ultee, 2000; De Graaf, De Graaf, Kraaykamp, & Ultee, 2003).

## 2. Theoretical background

### 2.1. Cultural resources and parental media socialization

A large body of research bears out the importance of parental resources for children's educational success (Aschaffenburg & Maas, 1997; Bourdieu & Passeron, 1977; Dumais, 2005; Farkas, 1996; Lamont & Lareau, 1988). Parents impart skills and competencies to their children, but this parental socialization differs both in quality and quantity between social groups. From Bourdieu's cultural reproduction hypothesis it follows that in the higher social groups advantageous cultural resources are transmitted from generation to generation (Bourdieu & Passeron, 1977). This reproduction process helps children from higher social strata to stay ahead, especially within the meritocratic schooling systems of Western societies.

Although the concept of cultural capital is widespread in stratification sociology, scholars in the field are equivocal about the exact definition of cultural capital (Lamont & Lareau, 1988; Sullivan, 2001, 2002; Van de Werfhorst, 2010). Most studies take cultural capital as being almost identical to parental highbrow cultural participation. This rather limited focus on elitist parental cultural outgoing behavior, and the accompanying advantages for children, disregards the possibility that parental popular or lowbrow cultural socialization activities may be detrimental to a child's educational success (Coleman, 1971). In this study we therefore argue that parents not only reproduce advantageous cultural assets over generations, they may also transmit unfavorable cultural practices to their children. Accordingly, parental media socialization can be a resource or a disadvantage for a child's educational career.

To gain insight into this reasoning it is helpful to distinguish between cultural capital as a social status symbol and cultural capital as a source of cogni-

tive competency (De Graaf, De Graaf, & Kraaykamp, 2000; Farkas, 1996; Lareau, 1987). First, from a status approach, it follows that parental cultural capital refers to a class-specific disposition that codifies boundaries (i.e. social inclusion and exclusion). From this perspective, cultural capital may both enhance and lower a person's social status, depending on the status of the specific cultural activity that one participates in. Taking part in lowbrow activities, that is, activities with a low or unfavorable status, may then harm a person's status position, compared to not participating at all. Hence, acquiring such negative parental cultural capital may hinder or even prevent a child from enrolling in higher levels of education. Because of the gap between home and school culture, children then may be unfamiliar with the informal and formal (highbrow) codes in school and consequently behave in ways that conflict with school culture and curriculum.

Second, from the cognitive perspective it follows that some parental cultural habits benefit the intellectual development of their children, thereby giving their children a head start in school. Parental participation in lowbrow cultural activities probably does not hinder children's cognitive development, but it does not help them either. These parents' low level of in-home cognitive stimulation might leave their children less prepared for higher levels of education and thereby limit their children's educational career. Both the status approach and the cognitive approach suggest the need to split the concept of cultural capital into beneficial and detrimental parental cultural resources and habits.

In this study we focus on parental television viewing and reading behavior as cultural activities or resources holding both positive and negative status values and that might be relevant in the context of children's schooling. The media currently hold an important place in almost every family home and subsequently are the subject of a variety of parent-child interactions. Media behavior is daily, it is observable, and it is time-consuming. Thus, when it comes to affecting a child's educational career, parental media socialization activities are likely to be important. Parental media socialization manifests in two manners (Kraaykamp, 2001; Notten & Kraaykamp, 2009a; Kloosterman, Notten, Tolsma & Kraaykamp, in press). First, parents raise and socialize their children by setting an example, thereby functioning as role models. Parents live a certain lifestyle, and children may interpret their parents' behaviors and preferences as the right way to go (Bandura & Walters, 1963). In doing so, children tend to copy their parent's media behavior. The socialization that takes place when children imitate parental media behavior is predominantly unintentional. Second,

parents may act as conscious educators. Parental media socialization is then effected via parent-child interactions regarding media consumption, such as parental guidance on television viewing or reading suggestions. To obtain insight into the actual process of cultural socialization, our study includes both aspects of parental media example and media guidance.

## 2.2. Socialization by parental media example

Television viewing is generally not considered to be a socially rewarding or high-status activity. Rather, TV viewing is largely associated with entertainment, passivity, low cognitive stimulation, reduced concentration and non-creativity. It consequently has a negative image. Also, actual television viewing is thought to take up time that could otherwise be spent on school-related activities and thus provides little cognitive competency (Hancox et al., 2005; Sharif & Sargent, 2006; Verboord & Van Rees, 2003). Spending large amounts of time watching television would therefore poorly match with school culture and curricula, especially at higher levels of education. Hence, compared to children whose parents do not watch much TV in their free time, children from families where great amounts of time are spent viewing television are probably less familiar with school norms and less prepared to meet the requirements of higher education (Vandewater et al., 2005; Zimmerman & Christakis, 2005). This cultural clash between home and school culture may ultimately hamper or even harm a child's school career (Elchardus & Siongers, 2003; Notten & Kraaykamp, 2009b; Sullivan, 2001). Therefore, we hypothesize that excessive *parental television viewing harms a child's educational attainment*.

Unlike TV viewing, reading books is a well-established and socially rewarded leisure activity. Reading books is believed to increase language development, literacy skills, interest in books, and to broaden a person's worldview (Leseman & De Jong, 1998; Schieffelin & Ochs, 1986). Parents who spend a substantial amount of their leisure time reading books are viewed as setting a beneficial example and stimulating their children to read (Kraaykamp, 2003). Since reading is valuable for development of cognitive competency and its status matches school culture relatively well, which appears to be a universal phenomenon (Evans, Kelley, Dikora, & Treiman, 2010; Notten & Kraaykamp, 2009b), parents who are avid readers would foster a successful educational career for their children. We thus expect that frequent *parental book reading enhances a child's educational attainment*.

Next to variation in the amount of reading and TV viewing, it might be important to acknowledge that books and television programs differ in content. Parents set an example not only in the time they spend on specific media sources, but also in the content of their media consumption. Some parents prefer highbrow media content, whereas others favor lowbrow content (Lareau, 2003; Notten & Kraaykamp, 2009a; Verboord & Van Rees, 2003). By highbrow media behavior we refer to the consumption of, and familiarity with, more elite and complex media content, such as literary reading and watching informative or cultural television programs. Highbrow media consumption is likely to stimulate a person's cognitive development, promote problem-solving skills and foster cultural competency. Moreover, it is a high-status activity that is well matched with school culture. Our hypothesis thus reads *parental highbrow book reading and highbrow television viewing enhance a child's educational attainment*.

By contrast, parental lowbrow media behavior is unlikely to (or does not sufficiently) enrich children with beneficial school-related skills and competencies. For example, consuming purely entertaining media in the parental home, such as watching soaps or reading romantic novels, is unlikely to foster a child's cognitive and language competency (Elchardus & Siongers, 2003). Such lowbrow activities hold a low status value and do not socialize children adequately with the complex verbal and academic skills necessary for enrolment in higher levels of education (Cook-Gumperz, 1973; Durham, Farkas, Hammer, Tomblin, & Catts, 2007; Lareau, 2003). Hence, *parental lowbrow book reading and lowbrow television viewing harms a child's educational attainment*.

### 2.3. Socialization by parental media guidance

So far, sociologists studying cultural socialization have largely focused on parental cultural behaviors and hardly recognized the importance of parent-child interactions. Pedagogical and communication research, however, shows that active guidance, such as giving instructions and setting rules for watching television, is a key part of parents' television socialization activities (Austin, 1993; Austin, 2001; Barkin et al., 2006). Also, scholars studying literary socialization have found that frequent parent-child interaction is highly relevant for the fostering of literacy skills and cultural behaviors (Durham et al., 2007; Garrett & Baquedano-López, 2002; Schieffelin & Ochs, 1986). Therefore, we argue that next to the example set by parents in media consumption, parent-child interaction regarding media is relevant

for a child's educational success. Accordingly, we expect parental media guidance to mediate the effect of the parents' own media habits on their children's educational attainment.

First we focus on parental interactions regarding television viewing. When it comes to the effects of television consumption results seem equivocal. Scholars testing displacement theory show that especially lowbrow (entertainment) television consumption absorbs time that otherwise might be spent on educational activities, like doing homework and reading (Hancox et al., 2005; Koolstra, Van der Voort, & Van der Kamp, 1997). Other studies, find that watching educational television programs enhances children's school readiness (Wright et al., 2001). In our study we must acknowledge that some parents supervise their children's television consumption, for instance by restricting or allowing TV viewing, to teach children how to use media in an advantageous way or to protect them from possible harmful effects, whereas others do not (Barkin et al., 2006; Valkenburg, Krckmar, Peeters, & Marseille, 1999). As a result, intensive parental guidance on television viewing might lead children to develop healthy TV habits on the one hand and school-related skills on the other. We therefore hypothesize that *parental television guidance enhances a child's educational attainment*.

Second, research repeatedly shows reading books to be an activity that stimulates children's cognitive development and cultural competency (Bus et al., 1995; Leseman & De Jong, 1998). Sulzby and Teale (1991) found parental support to be the most effective means to enhance children's reading achievement. Other scholars have shown that interaction between parents and children in literacy activities is highly relevant in preparing children for school (Kraaykamp, 2003; Kloosterman et al., in press; Schieffelin & Ochs, 1986; Verboord & Van Rees, 2003;). It is therefore likely that some parents will actively stimulate their children to read books, for instance, with bedtime reading or by discussing the content of a book, since these are the qualities needed to perform well in the higher levels of education. So, we hypothesize that *parental reading guidance enhances a child's educational attainment*. Note that we expect parental media guidance to mediate the effect of parents' media example on their offspring's educational attainment.

### 3. Data and measurements

To test our hypotheses we employ three waves of the Family Survey Dutch Population (FSDP), conducted in 1998, 2000 and 2003 (De Graaf et al., 1998; De Graaf,

De Graaf, & Kraaykamp, 2000; De Graaf, De Graaf, Kraaykamp, & Ultee, 2000; De Graaf et al., 2003). The FSDP combines face-to-face and written interviews, and is held among a nationally representative sample of the Dutch population between ages 18 and 70. In the FSDP a primary respondent and his/her partner are interviewed. The number of primary respondents and partners in the three surveys was 2029 in 1998, 1561 in 2000 and 2714 in 2003. Both respondents and partners are questioned about a broad range of topics regarding their life course and life situation. The FSDP gathers detailed information on various socialization activities in the family home during childhood and therefore suits our research question very well.

A major advantage of the FSDP is that it contains information on the siblings of all respondents and all partners, such as birth dates, educational attainment and occupational status. In the 2000 and 2003 FSDPs, information on all of the respondents' siblings is available. In the 1998 FSDP three siblings were randomly selected, and only information on these siblings was gathered. The hierarchical structure of the FSDP, that is, the nested structure of siblings in families, enables us to perform multilevel analysis, by which we obtain insight on the relevance of individual and family factors for a sibling's educational attainment. In the remainder of this study we use the term 'respondents' to refer collectively to primary respondents, partners and siblings.

A special quality of the FSDP data is that socialization and family-specific aspects are recorded retrospectively through the primary respondents. This first necessitates the assumption that parental media socialization is equal for all siblings in a family. Also, respondents' recall may be skewed by memory effects and social desirability bias. However, previous research on the FSDP data shows that no systematic error exists in retrospective measures of parental cultural capital (De Graaf, De Graaf, & Kraaykamp, 2000; De Vries & De Graaf, 2006). Additional analyses using interviews with the parents of a subset of our respondents (FNB 2000,  $N = 319$ ), enabled us to compare respondents' reports on parental reading behavior with reports by the parents themselves. Regression of parental reports on respondents' reports and respondents' own reading behavior yields no significant effect of respondents' current reading behavior, indicating no recall-bias directed at current respondents' behavior. We therefore conclude that our retrospective measurements of parental media behavior are not (considerably) biased by recall accuracy.

We selected respondents (primary, partners and siblings) older than age 24 to obtain a sample of people who had completed daytime education (95.0% of all

respondents). To ensure that a person's socialization was completed, we removed individuals still living with (at least one of) their parents (2.2% of respondents).<sup>2</sup> In the Netherlands, television was introduced around 1955 and generally accepted in the early 1960s. As a result, respondents born before 1955 and respondents without a television set in their home during childhood could not answer questions about their television-related socialization. We excluded these respondents (53.9%). Accordingly we analyze people from birth cohorts between 1955 and 1978 who experienced both reading and television socialization activities in their parental home.

The dependent variable *educational level* is measured as the final educational attainment of respondents in 10 categories. To obtain an appropriate interval scale, we applied a standard recoding procedure for the minimum number of years required to reach the educational level concerned: primary education (6), lower vocational training (LBO) (9), lower general education (MAVO) (10), intermediate general education (HAVO) (11), secondary vocational training (MBO) (12), pre-university education (VWO) (13), higher vocational training (HBO) (15), university (WO) (17) and postgraduate (PhD) (21).

We are interested in two types of media socialization activities: reading books and viewing television. All socialization measures refer to the time when the respondent was between ages 5 and 15. *Parental TV time* measures the example set by the parents with respect to time spent viewing television. Respondents were asked to indicate how much their parents watched television. A dichotomous variable was constructed: (0) parents watched less than 2 hours a day, (1) parents watched more than 2 hours a day. *Parental reading time* is measured by taking the sum of respondents' reports on the intensity of both fathers' and mothers' reading of six book genres. We labeled parents as more than average (i.e. frequent) readers when at least two book genres were reported as read often by either parent. A dichotomous variable was constructed: (0) parents read less than average, (1) parents read more than average.

Next, a confirmative factor analysis established a highbrow and lowbrow dimension for the TV programs parents preferred according to the respondents' reports.<sup>3</sup>

<sup>2</sup> We lack the housing information on a few siblings, so our dataset may contain a marginal proportion of siblings still living with their parents.

<sup>3</sup> Sports loaded a little higher on the popular dimension. Because of the popularity of sport programs (50% of respondents watched often) and the limited cultural content of these programs, this item is assigned to the lowbrow dimension.

We constructed *parental highbrow TV viewing* by taking the mean of the following two items after standardization: (a) parents watch informative programs and (b) parents watch cultural-artistic programs. Answer categories were (0) never, (1) sometimes and (2) often. *Parental lowbrow TV viewing* is measured by four items reflecting the lowbrow television programs that parents watched: (a) films or series, (b) live or game shows, (c) sports and (d) soaps. Answer categories again were (0) never, (1) sometimes and (2) often. Although films and series might also contain highbrow elements, factor analyses clearly confirmed this genre as lowbrow. A scale was created by taking the mean of the four items. Both aspects of favored parental TV content were standardized by ranking the scores from 0 to 1.

A confirmative factor analysis also established the existence of a lowbrow and a highbrow dimension in parental reading.<sup>4</sup> We constructed *parental highbrow reading* using respondents' reports on fathers' and mothers' reading (a) Dutch or translated literature, (b) novels in a foreign language and (c) popular-scientific books. Respondents' reports on *parental lowbrow reading* refer to fathers' and mothers' reading (a) detective, science fiction or war novels and (b) romantic novels. Answer categories were (0) never, (1) sometimes and (2) often. Scales were constructed taking average scores. Again, the variables were standardized by a ranking between 0 and 1.

*Parental TV guidance* is probed in the FSDP 2003 only, and is represented by several indicators representing parental television guidance (Valkenburg et al., 1999) at the time when the respondent was between 5 and 12 years of age. Here we use two items characterizing restrictive parental television guidance: (a) parents limited children's hours of TV consumption, and (b) parents had a specific TV timetable for the children. Answers were given on a 4-point scale ranging from (0) entirely untrue to (3) entirely true. To construct a scale, the items were standardized and average scores were calculated ( $\alpha = .68$ ).

*Parental reading guidance* is measured by five statements: (a) as a toddler I was read to by one of my parents, (b) for my birthday-Christmas-St. Nicholas I received books as a gift, (c) my parents recommended books, (d)

at home we discussed the books I read, (e) my parents were interested in what I was reading. Answer categories were (0) never, (1) sometimes and (2) often. Again, a scale was created taking average scores and standardized between 0 and 1 employing a ranking procedure ( $\alpha = .82$ ).

Parental social background here refers to parental educational level and occupational status. *Parental educational level* is measured using respondents' reports of both parents' educational attainment and ranges from 6 (primary school) to 21 years (PhD). We took the maximum of father's and mother's highest completed educational level. *Parental occupational status* is measured by taking the maximum of father's and mother's ISEI score of their occupation when the child was aged 15 (Ganzeboom, De Graaf, & Treiman, 1992). This ranges between 10 and 90. Both variables measuring parental social background are centered to the mean.

Several controls for family composition were taken into account. *Mother's age at childbirth* refers to the age of the mother in the year the respondent was born. To account for influential cases we rounded exceptionally young mothers up to the age of 16, topping down exceptionally old mothers to the age of 45. We centered the variable to the mean (29 years). *Parental divorce* indicates whether a respondent experienced a divorce of his/her parents in early childhood (between ages 0 and 15). Categories are (0) no parental divorce and (1) parental divorce experienced.<sup>5</sup> *Working mother* is measured by two questions on the working status of a respondent's mother, namely, (a) was your mother employed for at least 1 year during preschool and (b) was your mother employed for at least 1 year during primary school. Our variable indicates whether the mother was either (0) non-working or (1) working during the respondent's early years. *Family size* refers to the number of siblings in the family, including the respondent. We topped it down to a maximum of eight siblings (in 5.1% of the cases). *Sex* and *birth cohort* are included as controls. *Sex* indicates whether the respondent is a (0) male or (1) female. Birth cohort is a continuous variable ranging from 1955 to 1978 and is centered around 1964.

We dealt with missing values by using a multiple imputation procedure (Allison, 2000; Rubin, 1987; Rubin, 1996). This procedure replaces missing values by random imputation, here based on the observed val-

<sup>4</sup> Mothers reading Dutch literature and fathers reading detective, war and sf novels loaded on both dimensions. On theoretical grounds and because popular reading after removing detective novels then is measured only by reading romantic novels (which is done mostly by women) we decided to assign mother's Dutch literature reading and father's detective reading, respectively, to highbrow and lowbrow reading.

<sup>5</sup> This means that our dataset consists of a small number of half-siblings or step-siblings. We reduced this proportion by removing siblings born after the parents of the primary respondent or partner were divorced (0.5%).

Table 1  
Description of all variables.

	Minimum	Maximum	Mean	S.D.
Educational level respondent	6.00	21.00	11.90	2.94
Sex (0/1)	0.00	1.00	0.50	
Birthcohort (1964=0)	−9.00	14.00	−0.08	5.77
Mother's age at childbirth (29=0)	−13.00	16.00	0.32	5.89
Parents divorced (0/1)	0.00	1.00	0.05	
Working mother (0/1)	0.00	1.00	0.27	
Family size (1–8)	1.00	8.00	4.06	1.83
Parental educational level (10=0)	−4.00	11.00	0.24	3.25
Parental occupational status (46=0)	−36.00	44.00	−0.02	16.14
Parental TV time (0/1)	0.00	1.00	0.56	
Parental reading time (0/1)	0.00	1.00	0.33	
Parental highbrow TV viewing (0–1)	0.01	1.00	0.50	0.27
Parental lowbrow TV viewing (0–1)	0.00	1.00	0.50	0.29
Parental highbrow reading (0–1)	0.00	1.00	0.50	0.28
Parental lowbrow reading (0–1)	0.00	1.00	0.50	0.28
Parental TV guidance (0–1) <sup>a</sup>	0.02	1.00	0.50	0.29
Parental reading guidance (0–1) <sup>a</sup>	0.02	1.00	0.50	0.29

Source: FSDP 1998, 2000, 2003 (N level 1 = 8316; N level 2 = 3257).

<sup>a</sup> FSDP 2003 only (N level 1 = 3498; N level 2 = 1332).

ues of all other variables included in our models, and yields multiple ‘complete’ data-sets. Considering the percentage of missing values in our dataset (6.9%), five multiple imputed datasets were constructed. Analyses were performed on each dataset separately, after which the results were pooled. After performing the multiple imputation procedure we removed respondents with initially missing values on the dependent variable: respondents’ educational level (0.7%) (Von Hippel, 2007). Table 1 presents a description of the variables.

## 4. Analyses

### 4.1. Modeling strategy

To estimate individual and family (parental socialization) effects, we apply multilevel analysis (Snijders & Bosker, 1999). We constructed a hierarchical dataset with two levels: the lowest level (level 1) is that of individuals and the highest level (level 2) concerns the families of origin. Our multilevel models simultaneously analyze individual- and family-level effects. By estimating these multilevel models, we model heterogeneity and obtain more correct estimates of the family effects than models that neglect the data structure of children nested in families. Moreover, we can establish how much of the (total) variance in educational attainment is explained by family-specific qualities, and the extent to

which individual characteristics are relevant.<sup>6</sup> Our hierarchical dataset contains 8316 individuals nested in 3257 families. Because the analysis of the effects of parental guidance only makes use of the 2003 FSDP data, in this case the dataset contains 3498 individuals nested in 1332 families.

We start our analyses with estimation of the null model (Model 0) with a random intercept and without predictors. Model 1 includes control factors. Model 2 adds parental television and reading time. Model 3 explores the content of parental media consumption. Model 4 and 5 include measures of parental television and reading guidance.

### 4.2. Results

Table 2 shows the results of the estimated multilevel models examining the relation between parental media socialization and educational attainment. The null model reveals a significant variance at the family level, which indicates that children’s educational attainment varies significantly between families. We calculated the intraclass correlation (ICC = .45); 45% of the variance in educational attainment of siblings is due to differentiation between families.

<sup>6</sup> We applied cross-classified analyses to correct for the clustering of respondents and partners within a household. The results did not differ.



Table 2  
Multilevel regression models estimating the effect of parental media socialization on educational attainment, unstandardized coefficients.

	Model 0		Model 1		Model 2		Model 3		Model 4 <sup>a</sup>		Model 5 <sup>a</sup>	
	<i>b</i>	S.E.	<i>b</i>	S.E.	<i>b</i>	S.E.	<i>b</i>	S.E.	<i>b</i>	S.E.	<i>b</i>	S.E.
Individual level (level 1)												
Sex (0/1)			−0.19***	0.05	−0.18**	0.05	−0.19***	0.05	−0.23**	0.08	−0.22**	0.08
Birthcohort (1964=0)			0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.01	0.01	0.01
Family composition												
Mother's age at childbirth (29=0)			0.02***	0.01	0.02**	0.01	0.02***	0.01	0.01	0.01	0.01	0.01
Parents divorced (0/1)			−0.85***	0.15	−0.81***	0.15	−0.82***	0.15	−0.66**	0.23	−0.74**	0.23
Family level (level 2)												
Working mother (0/1)			−0.04	0.08	−0.01	0.08	−0.05	0.08	0.03	0.12	0.01	0.12
Family size (1–8)			−0.18***	0.02	−0.19***	0.02	−0.19***	0.02	−0.23***	0.03	−0.23***	0.04
Parental social background												
Parental educational level (10=0)			0.28***	0.01	0.25***	0.01	0.24***	0.02	0.23***	0.02	0.23***	0.02
Parental occupational status (46=0)			0.03***	0.00	0.02***	0.00	0.02***	0.00	0.02***	0.00	0.02***	0.00
Parental media example												
Parental TV time (0/1)					−0.71***	0.07			−0.62***	0.11		
Parental reading time (0/1)					0.36***	0.08			0.17	0.13		
Parental highbrow TV viewing (0–1)							0.21	0.14			0.18	0.22
Parental lowbrow TV viewing(0–1)							−0.52***	0.13			−0.55**	0.20
Parental highbrow reading (0–1)							0.78***	0.16			0.37	0.26
Parental lowbrow reading (0–1)							0.22	0.14			0.16	0.21
Parental media guidance												
Parental TV guidance (0–1)									0.07	0.19	0.07	0.19
Parental reading guidance (0–1)									1.03***	0.22	1.02***	0.24
Intercept	11.99***	0.04	12.72***	0.10	13.02***	0.11	12.40***	0.16	12.59***	0.23	12.24***	0.27
Variance												
Individual (level 1)	4.70***	0.09	4.72***	0.09	4.72***	0.09	4.72***	0.09	4.79***	0.14	4.80***	0.14
Family (level 2)	3.88***	0.15	2.08***	0.11	1.93***	0.10	2.00***	0.10	1.70***	0.15	1.77***	0.15
ICC	0.45											
Deviance (−2LL)	39982.541		38856.149		38740.923		38795.818		16178.452		16277.742	

\*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$ . Source: FSDP 1998, 2000, 2003 (N level 1 = 8316; N level 2 = 3257).

<sup>a</sup> FSDP 2003 only (N level 1 = 3498; N level 2 = 1332).

Model 1 includes individual- and family-level controls as well as family background aspects. The results indicate that daughters are somewhat less successful in their educational career than sons, and no significant effect of birth cohort was found. Having an older mother positively affects educational attainment ( $b = .02$ ), and a parental divorce during childhood has a negative effect on educational success ( $b = -.85$ ). Of the family-level controls, whether the mother works seems to have no significant impact, whereas living in a large family does negatively affect educational attainment ( $b = -.18$ ). Model 1 also comprises parental social background, and shows that both parental educational level and occupational status positively affect children's educational achievement. Parental educational level proves an especially important factor ( $b = .28$ ), which is in line with earlier research.

The time parents spent viewing television and reading books during the respondent's childhood is included in Model 2. In line with our expectations, the results indicate that parental TV time negatively affects the educational career of children ( $b = -.71$ ). Respondents with excessive television viewing parents during childhood end their educational career about 9 months ( $.71 \times 12$  months) earlier than respondents from parents who are moderate television viewers. These results show that growing up in a television-oriented household, for instance, could result in obtaining a diploma for secondary vocational education instead of a higher level pre-university diploma. By contrast, frequent exposure to parental reading in one's youth seems to foster educational achievement ( $b = .36$ ). Note however that the positive effect of parental reading is about half the magnitude of the negative effect of parental TV viewing. The effects of parental social background appear to be intermediated by parental media behavior. Parents' time spent watching television and reading books mediates about 11% of the effect of parental educational level and around 30% of the effect of parental occupational status. This may be seen as an indication that cultural reproduction partly works through parental media behavior.

Model 3 examines parental preferences for lowbrow and highbrow media content and the effects of such preferences on educational attainment. Unfortunately, time parents spent consuming different media and their preferred media content cannot be included in the same model due to high correlations. The results in Model 3 show that parental highbrow viewing does not significantly affect children's educational career. The results do seem to support our expectation that parents' lowbrow television viewing limits their children's educational success ( $b = -.52$ ). By frequently watching low-status

and non-informative television programs, parents seem to reduce the chances of their children entering the higher levels of education. In contrast, recurrent parental highbrow reading seems to foster educational achievement ( $b = .78$ ). Children exposed to frequent parental literary reading spent about 9 months longer within the educational system than children from non-reading parents. Although parents set a beneficial example by reading themselves, it is reading literature that actually enhances their children's educational career, since parental lowbrow reading turns out to be irrelevant.

Model 4 and 5 add parental media guidance. As stated above, in studying parental media guidance we are restricted to the 2003 FSDP data. This limitation results in fewer respondents in these two models.<sup>7</sup> The results of Model 4 and 5 give reason to conclude that parental stimulation of children's reading is profitable when it comes to educational attainment ( $b = 1.03$  and  $b = 1.02$ , respectively). Children who's reading behavior is encouraged by their parents, spend about 12 months longer within school than children who's parents do not or hardly show any interest in their children's reading behavior. Additionally, parent-child interaction on reading seems to mediate the influence of parental reading behavior. The positive effect of parental reading, both reading time and highbrow reading content, is almost halved and no longer significant. We thus seem to find evidence that when it comes to reading socialization, it is actually not the parental example but the parent-child interaction that is most effective.

Note that the effect of parental television guidance in Model 4 and 5 is positive but appears to be non-significant. This indicates that, when we control for all other socialization activities in our analysis, parental rules on television time are not noticeably associated with educational success on the long term.<sup>8</sup> The negative impact of both parental TV time ( $b = -.62$ ) and lowbrow television viewing ( $b = -.55$ ) remains highly influential.

## 5. Discussion

This article scrutinized whether specific parental media socialization activities function as a resource or disadvantage in a child's educational career. Only few cultural reproduction studies address the role of parental reading and television socialization in deter-

<sup>7</sup> A comparison of the results of Model 2 and 3 on the dataset of 2003 only, showed virtually identical effects.

<sup>8</sup> In line with our hypothesis a positive and significant bivariate relation exists between parental time-restrictive television guidance and educational success ( $r = .08$ ).

mining school success. Media socialization however is beneficial in fostering cultural competency, as it is likely to build problem-solving skills, stimulate cognitive development and familiarize children with school culture and school curricula content (Lareau, 2003; Leseman & De Jong, 1998). Contrarily, parental media socialization activities may be harmful too (Cook-Grumperz, 1973; Sullivan, 2001). When media socialization is characterized by lowbrow consumption and limited cognitive stimulation it might lower the chances of achieving a higher education. Dealing with the effects of media socialization we here studied parental reading and television socialization, distinguishing highbrow and lowbrow activities in both domains. Furthermore, we differentiated between the effects of the example set by parents in their media behavior and the effects of parental guidance with respect to media consumption. We applied multi-level analyses to Dutch sibling data (FSDP 1998, 2000, 2003) to analyze these issues, focusing on the long term effects of parental media socialization on children's final educational attainment.

Our results suggest two main conclusions. First, excessive television exposure in the family home is detrimental to a child's educational success. A parental example of excessive television viewing seems to conflict with school culture and norms, and apparently prepares children less well for a successful career in the higher levels of education. Not only is exposure to television in one's youth negatively related to final educational attainment, the parental example regarding preferred television programs (content) proves relevant as well. When parents frequently watch lowbrow or entertainment television programs this significantly lowers the educational achievement of their children on the long term. Second, we find substantial effects of parent-child reading interaction on educational attainment. Although the parental example of reading and preferring serious literature enhances children's success in school, literacy-stimulating activities appear to be especially important in promoting children's school performance. By means of activities like reading to children and discussing books, parents foster cultural competencies in their children which seem to pay off in the long run in terms of success at school.

Certainly our study has some drawbacks. First, we made use of retrospective data, which is frequently argued to be affected by memory effects and social desirability. Additional analyses on respondents' reports of parental cultural capital using the FSDP-data however revealed no systematic bias (De Graaf, De Graaf, & Kraaykamp, 2000; De Vries & De Graaf, 2006). Own calculations, using both respondents' and parents'

reports of prior parental reading support these claims. Nonetheless, applying a panel design could shed more insight into possible causality issues. Second, research in various domains has shown differential effects of socialization for boys and girls. While acknowledging that parental media socialization effects might be gendered, we consider this issue beyond the scope of the present study. We suppose the relevance of the current research is largely found in its extending the cultural capital thesis to the media domain and to possibly disadvantageous cultural socialization activities. We do propose future research to gain greater insight into possible (long-term) gendered effects of media socialization.

Recommendations for future research can also be made regarding parent-child interaction on television viewing. With televisions' attractions being a great source for parental concern, especially when it comes to children's development and well-being, we expected parental television guidance to be highly influential in enhancing their offspring's educational career. Although we found no significant direct effects of parents setting television rules, future studies may want to discuss possible long term indirect effects of parental television guidance on educational attainment.

The present study foremost underpins the relevance of media literacy for a child's educational career. Because families differ significantly in their media behaviors, other institutions might want to compensate for inequalities in this respect. Next to programs aiming at media education at home, policymakers and researchers addressing educational disparities might also consider paying greater attention to the long-term effects of media education as a part of school curricula. This becomes even more urgent in view of our finding that cultural socialization is not always beneficial. An "inappropriate" parental example regarding television viewing has serious negative effects on a child's educational performance. Hence, we think these cultural resources should be labeled as "harmful", as its effect is one of conferring disadvantageous cultural capital instead of merely failing to possess advantageous cultural resources. Thus, depending on the media source and media content, parental media socialization may function as a beneficial resource or as a disadvantage in a person's educational career.

## References

- Allison, P. D. (2000). Multiple imputation for missing data: A cautionary tale. *Sociological Methods and Research*, 28, 301–309.

- Aschaffenburg, K., & Maas, I. (1997). Cultural and educational careers: The dynamics of social reproduction. *American Sociological Review*, 62, 573–587.
- Austin, E. W. (1993). Exploring the effects of active parental mediation of television content. *Journal of Broadcasting and Electronic Media*, 37, 147–158.
- Austin, E. W. (2001). Effects of family communication on children's interpretation of television. In J. Bryant, & J. A. Bryant (Eds.), *Television and the American family* (pp. 377–439). New Jersey: Lawrence Erlbaum Associates.
- Bandura, A., & Walters, R. H. (1963). *Social learning and personality development*. New York: Holt, Rinhart and Winston Inc.
- Barkin, S., Ip, E., Richardson, I., Klinepeter, S., Finch, S., & Krcmar, M. (2006). Parental media mediation styles for children aged 2–11 years. *Archives of Pediatrics and Adolescent Medicine*, 169, 395–401.
- Bourdieu, P., & Passeron, J. C. (1977). *Reproduction in education, society and culture*. London: Sage.
- Bus, A. G., Van IJzendoorn, M. H., & Pelligrini, A. D. (1995). Joint book reading makes for success in learning to read: A meta-analysis on intergenerational transmission of literacy. *Review of Educational Research*, 65, 1–21.
- Coleman, J. S. (1971). *Resources for social change: race in the United States*. New York: John Wiley & Sons, Inc.
- Cook-Gumperz, J. (1973). *Social control and socialization. A study of class difference in the language of maternal control*. London: Routledge & Kegan Paul.
- Crook, C. J. (1997). *Cultural practices and socioeconomic attainment: The Australian experience*. Westport, CT: Greenwood Press.
- De Graaf, N. D., De Graaf, P. M., & Kraaykamp, G. (2000). Parental cultural capital and educational attainment in the Netherlands: A refinement of the cultural capital perspective. *Sociology of Education*, 73, 92–111.
- De Graaf, N. D., De Graaf, P. M., Kraaykamp, G., & Ultee, W. C. (1998). *Family survey Dutch population 1998 [datafile]*. Nijmegen, the Netherlands: Department of Sociology, Radboud University Nijmegen.
- De Graaf, N. D., De Graaf, P. M., Kraaykamp, G., & Ultee, W. C. (2000). *Family survey Dutch population 2000 [datafile]*. Nijmegen, the Netherlands: Department of Sociology, Radboud University Nijmegen.
- De Graaf, N. D., De Graaf, P. M., Kraaykamp, G., & Ultee, W. C. (2003). *Family survey Dutch population 2003 [datafile]*. Nijmegen, the Netherlands: Department of Sociology, Radboud University Nijmegen.
- De Graaf, P. M. (1986). The impact of financial and cultural resources on educational attainment in the Netherlands. *Sociology of Education*, 59, 237–246.
- De Vries, J., & De Graaf, P. M. (2006). Is the intergenerational transmission of high cultural activities biased by the retrospective measurement of parental high cultural activities? *Social Indicators Research*, 85, 311–327.
- DiMaggio, P. (1982). Cultural capital and social success: the impact of status culture participation on the grades of high school students. *American Sociological Review*, 47, 189–201.
- Dumais, S. A. (2005). Early childhood cultural capital, parental habits, and teachers' perceptions. *Poetics*, 34, 83–107.
- Durham, R. E., Farkas, G., Hammer, C. S., Tomblin, J. B., & Catts, H. W. (2007). Kindergarten oral language skills: A key variable in the intergenerational transmission of socioeconomic status. *Research in Social Stratification and Mobility*, 25, 294–305.
- Elchardus, M., & Siongers, J. (2003). Cultural practice and educational achievement: The role of the parents' media preferences and taste culture. *The Netherlands' Journal of Social Sciences*, 39(3), 151–171.
- Evans, M. D. R., Kelley, J., Dikora, J., & Treiman, D. J. (2010). Family scholarly culture and educational success: Books and schooling in 27 nations. *Research in Social Stratification and Mobility*, 28, 171–197.
- Farkas, G. (1996). *Human capital or cultural capital? Ethnicity and poverty groups in an urban school district*. New York: Aldine de Gruyter.
- Ganzeboom, H. B. G., De Graaf, P. M., & Treiman, D. J. (1992). A standard international socio-economic index of occupational status. *Social Science Research*, 21, 1–56.
- Garrett, P. B., & Baquedano-López, P. (2002). Language socialization: reproduction and continuity, transformation and change. *Annual Review of Anthropology*, 31, 339–361.
- Gentzkow, M., & Shapiro, J. M. (2006). Does television rot your brain? New evidence from the Coleman study (January 27). Available at SSRN: <http://ssrn.com/abstract=862424>.
- Hancox, R., Barry, J., Milne, J., & Poulton, R. (2005). Association of television viewing during childhood with poor educational achievement. *Archives of Pediatrics and Adolescent Medicine*, 159, 614–618.
- Kalmijn, M., & Kraaykamp, G. (1996). Race, cultural capital and schooling: An analysis of trends in the United States. *Sociology of Education*, 69, 22–34.
- Koolstra, C. M., Van der Voort, T. H. A., & Van der Kamp, L. J. Th. (1997). Television's impact on children's reading comprehension and decoding skills: A 3-year panel study. *Reading Research Quarterly*, 32(2), 128–152.
- Kloosterman, R., Notten, N., Tolsma, J., & Kraaykamp, G. (in press). The effects of parental reading socialization and early school involvement on children's academic performance: A panel study of primary school pupils in the Netherlands. *European Sociological Review*, doi:10.1093/esr/jcq007.
- Kraaykamp, G. (2001). Parents, personality and media preferences. *Communications*, 26, 15–36.
- Kraaykamp, G. (2003). Literary socialization and reading preferences: Effects of parents, the library, and the school. *Poetics*, 31, 235–257.
- Lamont, M., & Lareau, A. (1988). Cultural capital: Allusions, gaps and glissandos in recent theoretical developments. *Sociological Theory*, 6, 153–168.
- Lareau, A. (1987). Social class differences in family–school relationships: The importance of cultural capital. *Sociology of Education*, 60, 73–85.
- Lareau, A. (2003). *Unequal childhoods: Class, Race and family life*. Berkeley: University of California Press.
- Leseman, P. P. M., & De Jong, P. F. (1998). Home literacy: Opportunity, instruction, cooperation and social-emotional quality predicting early reading achievement. *Reading Research Quarterly*, 33, 294–318.
- Notten, N., & Kraaykamp, G. (2009a). Parents and the media. A study of social differentiation in parental media socialization. *Poetics*, 37, 185–200.
- Notten, N., & Kraaykamp, G. (2009b). Home media and science performance: A cross-national study. *Educational Research and Evaluation*, 15(4), 367–384.
- Rubin, D. B. (1987). *Multiple imputation for nonresponse in surveys*. New York: Wiley.
- Rubin, D. B. (1996). Multiple imputation after 18+ years. *Journal of the American Statistical Association*, 91, 473–489.

- Schieffelin, B. B., & Ochs, E. (1986). Language socialization. *Annual Review of Anthropology*, 15, 163–191.
- Sharif, I., & Sargent, J. D. (2006). Association between television, movie, and video game exposure and school performance. *Pediatrics*, 118(4), 1061–1070.
- Snijders, T. A. B., & Bosker, R. J. (1999). *Multilevel analysis. An introduction to basic and advanced multilevel modeling*. London: Sage.
- Sullivan, A. (2001). Cultural capital and educational attainment. *Sociology*, 35, 893–912.
- Sullivan, A. (2002). Bourdieu and education: how useful is Bourdieu's theory for researchers? *The Netherlands' Journal of Social Sciences*, 38, 144–166.
- Sulzby, E., & Teale, W. (1991). Emergent Literacy. In R. Barr, & al. et (Eds.), *Handbook of reading research* (pp. 727–758). New York: Longman.
- Valkenburg, P. M., Cantor, J., & Peeters, A. L. (2001). Fright reactions to television. A child survey. *Communication Research*, 27(1), 82–99.
- Valkenburg, P. M., Krcmar, M., Peeters, A. L., & Marseille, N. M. (1999). Developing a scale to assess three styles of television mediation: 'instructive mediation', 'restrictive mediation', and 'social covieing'. *Journal of Broadcasting and Electronic Media*, 43, 53–66.
- Vandewater, E. A., Bickham, D. S., Lee, J. H., Cummings, H. M., Wartella, E. A., & Rideout, X. V. (2005). When the television is always on: Heavy television exposure and young children's development. *American Behavioral Scientist*, 48(5), 562–577.
- Van de Werfhorst, H. G. (2010). Cultural capital: strengths, weaknesses and two advancements. *British Journal of Sociology of Education*, 31(2), 157–169.
- Verboord, M., & Van Rees, K. (2003). Do changes in socialization lead to decline in reading level? How parents, literary education, and popular culture affect the level of books read. *Poetics*, 31, 283–300.
- Von Hippel, P. T. (2007). Regression with missing ys: An improved strategy for analyzing multiply imputed data. *Sociological Methodology*, 37, 83–117.
- Wright, J. C., Huston, A. C., Murphy, K. C., St.Peters, M., Pinon, M., Scantlin, R., & Kotler, J. (2001). The relations of early television viewing to school readiness and vocabulary of children from low-income families: The early window project. *Child Development*, 72, 1347–1366.
- Zimmerman, F. J., & Christakis, D. A. (2005). Children's television viewing and cognitive outcomes. A longitudinal analysis of national data. *Archives of Pediatrics and Adolescent Medicine*, 159, 619–625.

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