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Parents and the media

Causes and consequences of parental media socialization

Een wetenschappelijke proeve op het gebied van de
Sociale Wetenschappen

Proefschrift

ter verkrijging van de graad van doctor
aan de Radboud Universiteit Nijmegen
op gezag van de rector magnificus prof. mr. S.C.J.J. Kortmann,
volgens besluit van het college van decanen
in het openbaar te verdedigen op dinsdag 6 september 2011
om 15.30 uur precies

door

Natascha Jeanette Wilfrida Rachel Notten

geboren op 16 april 1972
te Herwen

Notten, N.J.W.R.

Parents and the media

Causes and consequences of parental media socialization

Dissertation Radboud University Nijmegen, the Netherlands

ISBN: 978-90-817588-0-2

Design: Ontwerpbureau Lood / Bart van der Mark

Print: Ipskamp Drukkers Nijmegen

Copy-editor: Michelle Luijben

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Promotor: Prof. dr. G.L.M. Kraaykamp

Manuscriptcommissie:

Prof. dr. J.M.A.M Janssens (voorzitter)

Prof. dr. P.M. de Graaf (Universiteit van Tilburg)

Prof. dr. J. de Haan (Erasmus Universiteit Rotterdam / Sociaal en Cultureel Planbureau)

Voorwoord

Dit boek is het resultaat van 6 jaar intensief leven. Waarbij het grootste deel achter de computer plaats heeft gevonden, maar het grootste deel ook niet. En hoewel ik degene ben geweest die al deze pagina's heeft volgetypt, was dat niet gelukt zonder de support en de nodige afleiding door de mensen om mij heen. Zowel familie, vrienden, buurtgenoten en (ex)collega's hebben mij geholpen en geïnspireerd bij het afronden van dit project. Dank jullie voor dit alles, ook al is jullie bijdrage vaak waarschijnlijk niet bewust geweest.

Een paar mensen wil ik in het bijzonder danken. Gerbert, onze samenwerking de afgelopen jaren heb ik als heel plezierig ervaren. Je manier van begeleiden heeft mij op weg geholpen en gehouden; concreet, efficiënt en met een lach. Belangrijk voor mij was dat ik altijd het gevoel heb gehad dat je alle vertrouwen had in mij en in mijn invulling van het project. Dank hiervoor.

Ook heb ik met fijne co-auteurs samengewerkt aan dit boek en ben ik, ieder om specifieke redenen, dankbaar voor hun inzet en betrokkenheid. Jochem voor zijn enthousiasme en zorg, Ruben voor de menselijke noot in het lislrelverhaal. Wout, je suggesties en tips waren inspirerend en kwamen voor mij op het juiste moment. Patti Valkenburg en Jochen Peter wil ik danken voor de prettige samenwerking en gastvrijheid tijdens mijn verblijf bij de Amsterdam School of Communication Research (ASCoR), Universiteit van Amsterdam.

Natuurlijk wil ik ook graag de leden van de manuscriptcommissie, Jan Janssens, Paul de Graaf en Jos de Haan, bedanken voor de tijd en de moeite die zij hebben genomen om mijn proefschrift te lezen en te beoordelen.

Carinda, zonder jou weet ik niet of ik had doorgezet na 10 jaar afwezigheid. We hebben destijds heel wat uren vol verbazing naar spss syntaxen zitten kijken. Maar bovenal ben je gewoon een hele fijne en lieve vriendin geworden. Rianne, zowel je inhoudelijke visie als de cola & chocola momenten waren top! We hebben heel wat bergen verzet, maar samen was dat een stuk leuker en makkelijker. Je lieve telefoontjes tijdens de laatste fase van de totstandkoming van dit boek waren heel waardevol voor mij.

Ik denk dat ik de beste paranimfen heb die je je maar kunt denken!

De (ex)collega's van de vakgroep sociologie (en voorheen methoden) in Nijmegen wil ik danken voor hun betrokkenheid, op persoonlijk vlak en bij de inhoud van dit proefschrift. Jullie tips en kritische opmerkingen tijdens de vakgroepseminars (en de nodige afleiding tussendoor) hebben zeker bijgedragen aan de kwaliteit van dit proefschrift. Een paar mensen wil ik nog in het bijzonder bedanken. Marieke, je enthousiasme (over gezin en onderzoek) was altijd aanstekelijk. Heerlijk om behalve over significante effecten ook over allerlei kinderdingen te kunnen praten. Ellen en Eva,

de start was zoveel makkelijker door jullie aanwezigheid en betrokkenheid. Marijke, bedankt voor je secretariële ondersteuning en de gezellige praatjes de afgelopen jaren.

Mijn ouders, zussen en schoonfamilie; jullie interesse en natuurlijk het vele oppassen heeft het voor mij mogelijk gemaakt aan dit boek te beginnen en het af te ronden. En Bart, je hebt er weer iets moois van gemaakt. Karin, Peet en An; supervriendinnen die al zo lang mijn leven met mij delen dat hun bijdrage, op alle terreinen, van onschatbare waarde is. Annemieke, ook van zo'n grote afstand weet ik dat je altijd achter mij staat.

En dan mijn allerliefsten. Koen, wat had ik zonder jou ontmoeten? Door jouw liefde en steun, en gewoon om wie jij bent, heb ik dit allemaal kunnen doen. Ik heb je lief. Sep, Olle en Rubie. Door jullie kon ik ook als ervaringsdeskundige over mediaopvoeding schrijven. Ik kan niet in woorden uitdrukken hoeveel ik van jullie hou. Mijn liefde is geheel onvoorwaardelijk en blijft jullie de rest van je leven achtervolgen. En zoals uit dit onderzoek blijkt, de door mij gegeven opvoeding ook. We hebben het er later nog wel eens over.

Natascha Notten, 2011

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I Introduction

1.1 Media in modern Dutch society

Media of various forms and types is interwoven in the daily lives of virtually everyone in modern societies -- in workplaces, in schools and in the private sphere. In the Netherlands, people spend about 40% of their leisure time using media (www.scp.nl, 2011), for the most part (up until now) within the family home. Dutch children reportedly spend some two hours a day viewing television (SKO, 2011) and about one hour a day using the internet and computers (Duimel & de Haan, 2007; Livingstone, Haddon, Görzig and Ólafsson, 2011), whereas they devote less than half an hour a day to reading (De Vries, 2007; www.scp.nl, 2011). When it comes to children's media use, there is much discussion and consensus about the effects of media exposure. Media consumption has been found to have potential positive effects on children's development, but many negative consequences have been suggested as well. For instance, childhood reading has been found to benefit language proficiency and reading skills (Bus, 2001; Sénéchal & LeFevre, 2002). Although educational television programs like Sesame Street are known to stimulate children's cognitive development (e.g. Fisch, 2004; Fender, Richert, Robb & Wartella, 2010), (adult) violent television and online gaming have been found to have a negative impact on children's and adolescents' well-being (e.g. Valkenburg, 2004, Nikken, 2007). Hence, because of the widespread use of media and its mixed effects, especially on children, it is not surprising that media literacy has become a pressing issue in youth and educational policy.

In the Netherlands the concept of media literacy (i.e. 'mediawijsheid') was introduced in 2005 by the Dutch Council of the Arts ('Raad van Cultuur'). It refers to media use knowledge and skills that are relevant for a person's well-being and social participation in today's media-based society (Raad voor Cultuur, 2005). Nowadays, an increasing number of policy initiatives aims to promote awareness of media's effects and to stimulate critical media consumption. The idea is to teach children to use media in a healthy and beneficial way. Since parents are still the most influential persons in a child's (early) development and socialization, it is not surprising that attention has also been paid to media socialization activities within the parental home. In the Netherlands, for instance, policy initiatives like the establishment of a rating system for audiovisual productions (Valkenburg, Beentjes, Nikken & Tan, 2002; www.kijkwijzer.nl, 2011), free library membership for children (instituted in 1973) and national campaigns (see e.g. www.nationalevoorleesdagen.nl, 2011) encourage parents to get involved in their children's media use. Today, as a result of public policy as well as private actions of parents, a number of programs and projects inform policymakers as well as educators and parents about media use that may be beneficial or disadvantageous for children's well-being (see e.g. www.mediawijzer.net, 2011; www.lezen.nl, 2011).

Hence, with media literacy being such an important part of socialization and with media use becoming ever more essential in our society, research on the possible causes and lasting effects of different parental media socialization activities is vital. To develop policy that encourages parents (and relevant others) to guide children to become healthy media users, insight is needed into the effects of parental media socialization in the long term. Therefore, the current study focuses on the enduring effects of parental media socialization activities on a child's development. First, it studies how parents foster their children's media use. Next, it examines the eventual long-term consequences of this parental media-specific socialization for a child's development and well-being over the life course. More specifically, lasting media socialization effects are scrutinized by looking at a person's educational attainment, current media tastes and weight status.

1.2 Theoretical and empirical background and lacunas therein

This study is embedded in several research traditions within the social sciences. Throughout this thesis, parental media socialization is studied mainly from a cultural and media sociological point of view. Yet, a major theoretical advancement of this research is its integration of theoretical insights from media studies and developmental or pedagogical studies. Hence, this research aims to study parental media socialization from a multidisciplinary viewpoint, in order to gain a better understanding of the parental media socialization process. In doing so, the sociological perspective on a person's cultural socialization is enriched with pedagogical insights regarding learning theories and with media studies regarding the effects of media and media mediation strategies in the family home.

1.2.1 Insights from pedagogical studies: social learning theory

Obviously, when it comes to parenting and socialization processes, insights from pedagogical and child developmental studies are indispensable. Scholars in this field of research widely agree that the family environment is highly influential in a child's development (Bandura & Walters, 1963; Bronfenbrenner, 1979; Gauvain, 2001; Kohn, 1969; Vygotsky, 1978). It is beyond the scope of this study to provide an extended review of theories and empirical research on child development and parenting practices. However, the pedagogical theory and insights that have given theoretical shape to prior and current studies of cultural and media socialization do warrant a brief mention here. The importance of role modeling is a recurrent theme within pedagogical and developmental studies. From this perspective, parents are found to function as role models for their children. Most evident here is Bandura's 'social or observational learning theory' (Bandura & Walters, 1963; Bandura, 1977). Social learning theory states that learning results from observing the behaviors of others, especially those one feels

close to, and the consequences of these behaviors. So, as a result of observing their parents' actions and routines, children learn and incorporate complex as well as routine behaviors that they perceive as 'beneficial' or at least as 'most appropriate'. Hence, by imitating their parents' actions children learn all sorts of behaviors in a natural way, while not necessarily understanding them. According to Bandura and Walters (1963), social or observational learning is the most essential form of learning through which a broad variety of social behaviors may be acquired. And because children tend to do what they see their parents doing, observational learning takes place constantly and automatically. A relevant aspect of social learning theory is that imitation is assumed to proceed even without children being rewarded for their behavior or interacting with the parent. Therefore parental socialization might take place without the parents actually being aware of it. Consequently, at least from the parents' perspective, parental socialization takes place foremost unintentionally.

Bandura's learning theory is 'observational' because children observe and imitate the behaviors that their parents expose. The 'social' aspect of Bandura's theory refers to the fact that socialization processes take place within a specific social context, transmitting particular social behaviors and norms. In learning or role theory, the accent lies on contextual factors in an individual's development. From this perspective socialization processes reflect the acquisition of appropriate norms and values, which enable acceptance in a specific social group. Via observing and imitating their parents' routines, children acquire various skills and competencies, but, more or less indirectly, also a sense of social norms and group identity. Children learn about social norms and cultural practices belonging to their social group by being exposed to family routines (Bandura, 1977; Bandura & Walters, 1963; Gauvain, 2001; Grusec & Davidov, 2010; Linebarger & Vaala, 2010). Obviously, social learning theory confers family a prominent role in cultural socialization.

The current study employs pedagogical and developmental research to gain insight into the mechanisms underlying parental media socialization processes. Bandura's social learning or role modeling theory implies a rather unintentional socialization process, at least from the perspective of the parent. Yet, acquisition and reproduction of cultural knowledge and skills may also occur by concrete and intentional parental teaching and instruction. Parents purposely teach their children certain behaviors, norms and values by guiding their children's learning of particular skills and activities (e.g. Vygotsky, 1978). Moreover, pedagogical and developmental scholars assert that the conditions and climate in the parental home are crucial for a child's development and well-being (Benett, Weigel & Martin, 2002; Bus, Van Ijzendoorn & Pelligrini, 1995; Fiese et al., 2002). The current study acknowledges and takes into account that the effects of parental socialization or nurturing depend on the quality or intensity of parent-child bonding as well as on structural family conditions (Bianchi & Robinson, 1997; Coleman 1988; Fergusson & Woodward, 1999). Combining the abovementioned pedagogical insights with sociological research on cultural and media socialization may result in

insights into actual processes of parental media socialization, which is one of the major advancements of the current study.

1.2.2 Insights from communicational and media studies

Communicational and media studies are relevant to provide insight into the possible effects of media use, social differentiation in media use, and media-related interactions and communication within the family. This is especially true when it comes to visual media. Empirical studies from the field of media research on social distinctions in media use mainly elaborate on the ‘uses-and-gratification approach’ (Blumler, 1979; Blumler & Katz, 1974; Roe, 2000; Rosengren & Windahl, 1989). These contributions assume that media use is an intellectual activity that can be explained by an individual’s cognitive and cultural competencies. People are thus viewed as critical consumers or active audience members, and they choose the media type and content that best fits their preferences and needs. This line of research actually closely resembles sociological research on social stratification in media use in that both expect people to differ significantly in their media tastes and matching behaviors (e.g. Kraaykamp, 2001; Van Eijck & Van Rees, 2000).

Social inequality in media use is a less studied topic within media research. The majority of media studies aim to better understand the effects of media, especially television and, more recently, also digital media. For instance, following Bandura’s ‘bobo-doll experiments’ (Bandura, 1965), many researchers investigated the effects of television exposure and specific television content on aggressive behavior (e.g. Nathanson, 1999; Valkenburg, 2004), alcohol consumption (Engels et al., 2009), smoking (Gidwani et al., 2002) and other, mainly unfavorable, social behaviors. Hence, television exposure is largely perceived as negative, both due to its displacement of other more beneficial and (socially) rewarding activities (‘time displacement theory’) as well as because of its inappropriate and harmful content (‘role model theory’). The idea here is that media use is rather disadvantageous for a child’s cognitive development and emotional well-being. Yet, some studies also reveal positive or beneficial effects of television consumption (e.g. Fender et al., 2010; Gentzkow & Shapiro, 2006; Wright et al., 2001). Children may learn from television content, for instance, improving their vocabulary and language development. However, media research has paid less attention to finding out which social groups actually benefit from favorable media effects and which are predominantly confronted with the negative effects of media consumption.

Media researchers have also studied family communication patterns regarding media consumption. Children’s exposure to and consumption of media, and their parents’ efforts to guide this, has long been a relevant topic in media research (e.g. Buerkel-Rothfuss & Buerkel, 2001; Livingstone & Helsper, 2008; Lull, 1988; McLeod & Brown, 1979; Pasquier, 2001; Valkenburg, 2004). Within communication research three distinct overarching types of parental television mediation or guidance are distinguished:

restrictive parental guidance, instructive parental guidance, and parental covieing^{1,2}. These measures or indicators have become embedded in research on parents and their efforts to guide their children’s media use. Nevertheless, within media and communication research, few studies are available on the long-term effects of parental media socialization for a child’s success and well-being. The current study tries to fill this lacuna by scrutinizing the continuing effects of parental media socialization for a child’s well-being, success and cultural behaviors over the life course. Hence, a major advancement of the current study is its examination of the lasting effects of parents’ role modeling and of parental guidance activities regarding media use.

1.2.3 Sociological research on parental cultural socialization

The current study elaborates on sociological research examining the intergenerational transmission of social and cultural inequality and thus fits into the tradition of social stratification research. Studies within this scientific field focus on social mobility and social inequality, typically explaining a person’s social status or success by (parental) background features. From this perspective, following Blau and Duncan’s ‘status attainment model’ (1967), both socialization and allocation are relevant in predicting a person’s social status. So, next to, or as argued in this study, prior to, individual skills and capacities, parents play a crucial role in directing a person’s social success and well-being because of the resources, status and skills parents may transmit to their children. According to Bourdieu (1984), parents may transmit financial, social and cultural resources or capital to their children. And because these resources are not equally distributed among parents from different social backgrounds, the intergenerational transmission of assets is socially differentiated. Moreover, Bourdieu (1973, 1984) states that in contemporary societies, where traditional class hierarchy has become vague and financial resources appear less relevant in acquiring a certain social position, the (parental) cultural resources, as in cultural codes and behaviors, are increasingly important features in establishing social boundaries and reproducing the family’s social status. Hence, part of the effect of social origin on a person’s success in life is explained by the cultural socialization in the parental home.

Following Bourdieu’s ‘cultural reproduction theory’, cultural resources are unequally distributed in society, to the advantage of the upper social strata. This cultural social stratification may occur rather unintentionally, since cultural values and skills are learned automatically through family socialization processes which are assumed to start at birth. Indeed, cultural practices are predominantly learned in the family home,

1 Since terminology varies within and between the different social sciences, this study uses the term ‘parental media guidance’ when referring to parent-child interaction on media use.

2 Note that covieing is primarily related to television viewing; co-use or co-playing is more relevant in studies on digital media guidance.

resulting in class differences in early childhood which last into adulthood. These social or cultural class differences are argued to have continuing effects, mostly because of the school system, which is actually found to favor children from higher socioeconomic households due to its value-laden curricula (Bourdieu & Passeron, 1990 [1977]). Ultimately, high-status children in particular probably benefit most from parental cultural socialization, as cultural reproduction helps children from higher social strata to stay ahead.

Although use of the concept of cultural socialization or cultural reproduction is widespread in stratification sociology, there is no strict universal measurement of parents' cultural resources or capital (Lamont & Lareau, 1988; Sullivan, 2001, 2002). There is ample research on parental cultural reproduction of highbrow outward-oriented cultural behaviors, such as visiting theatres and museums, which has been found to be beneficial to a child's development (Becker, 2010; DiMaggio, 1982; De Graaf, 1986; Kraaykamp & Van Eijck, 2010; Sullivan, 2001; Van Eijck, 1997). For instance, children with parents favoring highbrow cultural activities are found to have a head start at school. In recent decades scholars have pointed out the relevance and increase of popular cultural participation, such as visiting pop concerts and musicals (e.g. Peterson & Kern, 1996; Katz-Gerro, 1999). Hence, parental cultural socialization activities are also likely to represent and reproduce popular or lowbrow cultural norms and behaviors, which are theorized as being less beneficial and even rather disadvantageous for a child's social success (Bourdieu & Passeron, 1990 [1977]; Bourdieu, 1984; Coleman, 1971). The current study contributes to cultural reproduction theory by arguing that parents not only reproduce advantageous highbrow cultural assets and skills over generations; they may also transmit less socially rewarded lowbrow or popular cultural practices and norms to their children. In doing so, this study differentiates between cultural capital as a symbol of social status and source of cognitive competency (De Graaf, De Graaf & Kraaykamp, 2000; Farkas, 1996; Lareau, 1987).

This thesis focuses on parental media socialization as a specific type of parental cultural activity, transmitting both positive and negative status values as well as cognitive and cultural resources. Firstly, following Weber (1968) and Veblen (1953 [1899]), Bourdieu argues that cultural behaviors are predominantly driven by status motives and identify social rankings. Hence, cultural and thus also media tastes and consumption patterns are used for both social identification and social exclusion. From this status perspective, parental media socialization may both enhance and diminish a person's social status, depending on the status of the specific cultural codes and behaviors that one has learned in the family home. Familiarity with highbrow media behaviors then probably enhances a person's social status. On the other hand, a preference for media with a lowbrow and thus unfavorable prestige may harm a person's status position, especially when compared to not consuming such media at all. Secondly, from a cognitive perspective, it follows that some parental cultural and media socialization activities benefit the intellectual and cultural development of children whereas others do not.

Especially highbrow or more complex parental media preferences, such as reading literature, may stimulate cognitive development, and thereby give children a head start in life. On the other hand, parental consumption of lowbrow media probably does not hinder children's cognitive development, but neither is it likely to help them.

To conclude, in line with both social value status and the cognitive viewpoint, parental cultural and media socialization may be divided into beneficial and disadvantageous socialization activities. The current study focuses on the intergenerational transmission of parents' media competencies, which is hypothesized to contribute to maintaining social inequality. Moreover, research on cultural reproduction corroborates that parental cultural participation is crucial in predicting a person's cultural competency (De Graaf, 1986; Van Eijck, 1997). Nevertheless, cultural reproduction research remains rather unclear as to how exactly parents' own cultural tastes or behaviors affect their children's cultural resources. The current study takes this limitation into account by analyzing several concrete aspects of parental cultural (i.e. media) socialization.

1.2.4 *Advances*

Use of insights from the abovementioned social research traditions enables us to better understand processes, differentiation in and long-term effects of parental media socialization. Advancement in this line of research is derived from the combination of these different insights: media and pedagogical research provides insight into potential media effects and the actual meaning of socialization within the parental home, while sociological research focuses on how these might differ between families (i.e. social groups).

This research contributes to existing theory and knowledge in several respects. First, it makes theoretical and empirical contributions to research on the reproduction of cultural resources. The media aspects of parental cultural socialization are studied, thereby integrating media preferences and behaviors into cultural reproduction research. Media consumption is daily, recurrent, observable and time-consuming, far more so than the elite cultural outings traditionally investigated in cultural reproduction research. Thus, when it comes to cultural socialization and a child's development, parental media socialization activities are likely to be extremely relevant.

Second, this study explicitly acknowledges parents' role as intentional and unintentional educators. To better understand how the media socialization process (i.e. intergenerational transmission of media competencies) might actually take place, three distinct types of parental media socialization are distinguished: the example set by parents in their own media preferences and behaviors (parental media example), parent-child interactions on media consumption (parental media guidance) and media access in the parental home (parental media resources). Moreover, this study proposes these different socialization activities to be causally interrelated.

Third, the current study may be regarded as innovative in that it acknowledges distinct

social and cognitive aspects of both media type and content. Media sources and media content are perceived as differing in their social value status and the degree of cognitive stimulation they offer. This study proposes that parental highbrow media socialization activities, such as reading literature and watching informative television programs, enhance a child's social success and cultural competencies. Lowbrow parental media socialization, such as an example of excessive television viewing and reading pulp fiction, may then harm a child's overall well-being and development. Hence, within the overall notion of cultural resources, the current study distinguishes between 'beneficial' and 'disadvantageous' cultural (i.e. media) resources and activities.

Fourth, previous research on media socialization activities within the parental home deals mainly with children still living in the family home, in other words, with short-term effects (e.g. Buijzen, 2009; Nathanson, 1999; Valkenburg, 1999). This study, however, seeks to understand possible lasting effects of parental media practices. The focus here is on the long-term effects of parental media socialization on several terrains.

Fifth, throughout this study several advanced statistical techniques are applied, such as multilevel analyses and structural equation modeling. Analyses are performed on representative cross-sectional data from four waves of the Family Survey of the Dutch Population (De Graaf, De Graaf, Kraaykamp & Ultee, 1998, 2000, 2003; Kraaykamp, Wolbers & Ruiter, 2009), which offers detailed current and retrospective information on Dutch respondents' individual life course, family and childhood characteristics. Data from the OECD Programme for International Student Assessment (PISA) conducted in 2006 (OECD, 2006) is used to position our research ideas and findings in an international context and to provide broader (cross-country) insight into the cultural socialization process. Hence, this study includes individual, family and country level effects.

1.2.5 Central research questions

This study's first step is to find out the actual extent of social differentiation in parental media socialization. Next, long-term effects of parental media socialization are analyzed on different terrains. As cultural reproduction research points out, a person's educational success is highly influenced by family-specific or parental cultural socialization (e.g. De Graaf, 1986; Lareau, 1987). The current study's aim in this respect is to learn whether parents' media socialization affects their children's educational success. Further, prior research corroborates Bourdieu's cultural reproduction theory by studying parent-child similarities in outward-oriented cultural behaviors (Kraaykamp & Van Eijck, 2010; Nagel & Ganzeboom, 2002). The intention here is to gain insight into whether and how media taste and preferences are intergenerationally transmitted. Finally, reflecting broad concern about media use among today's children and its health effects (WHO, 2011; OECD, 2011), this study examines whether and how parental media socialization may contribute to or hamper a child's weight status (BMI score). Hence, the two main research questions underlying this thesis read as follows:

- 1 To what extent do parental media socialization activities differ between families?
- 2 To what extent do parental media socialization activities continue to affect children's (a) educational success (b) media taste and (c) weight status in the long term?

This study focuses on parents' media preferences and behaviors in a person's youth, and the continuing effects of these tastes and matching socialization practices on a person's (i.e. the child's) behaviors and preferences in different phases of adulthood. This study employs a life course perspective, integrating aspects of previous phases into the next stage, resulting in a cumulative design. Figure 1.1 presents the outline of this study.

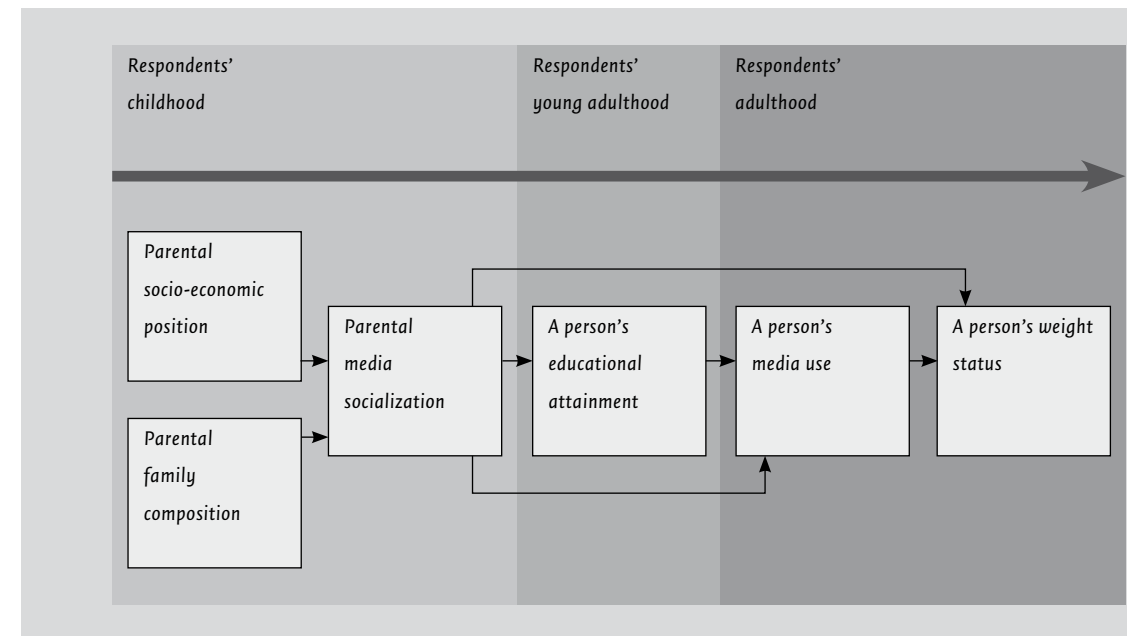


Figure 1.1 Outline of this study

1.3 Understanding parental media socialization

Parents likely nurture their children according to the values, norms and behaviors that they believe are most appropriate, beneficial and desirable for their children's (future) lives. This socialization might take place rather unintentionally, because parents expose their children to their tastes and preferences through their day-to-day and routine behaviors. But socialization may also occur intentionally, with parents actively mediating their children's behaviors, norms and values (Bandura & Walters, 1963; Bennet et al., 2002; Darling & Steinberg, 1993; McLeod & Brown, 1976). Combining theory and insights from different disciplines within social sciences, the remainder of this study distinguishes three distinct forms or indicators of parental media socialization: parental media examples, parental media guidance and parental media resources.

1.3.1 Parental media preferences and role modeling: the imitation perspective

Scholars in various social scientific disciplines agree that the social context, and especially the inner circle consisting of the primary family, is most important in shaping a child's (i.e. a person's) behaviors and attitudes (e.g. Bourdieu, 1984; Bronfenbrenner, 1979; Lareau, 2003). Insight into how these education or socialization processes actually occur is offered by 'social learning theory' (Bandura, 1977; Bandura & Walters, 1963), which presumes that children learn their parents' behaviors and norms by observation and replication. Because parents behave the way they do, this socialization may be rather unintentional. Overall, the idea of social learning and imitation fits in nicely with Bourdieu's cultural reproduction theory, which also supposes that cultural socialization takes place within the family home, rather unintentionally or automatically, inevitably starting at a child's birth and lasting into adulthood. Hence, this study seeks insight into the reproduction processes relevant to the long-term effects of parental media socialization, by studying the role of the parental media example (i.e. parents' media preferences) and children's imitation of parental media tastes and habits. In the remainder of this study this aspect of media socialization is referred to as the 'parental media example' or 'imitation perspective'. Moreover, this study highlights that parents may well differ in the media resources and content they prefer, and thus parental media socialization activities may be 'beneficial' or 'disadvantageous' to a child's development and success in life. Note that in the remainder of this thesis parental media behavior or consumption is interpreted as an indication of parents' own media preferences and values (Lareau, 2003; Gentile & Walsh, 2002; Yaish & Katz, 2010).

1.3.2 Parental media resources: the access perspective

Another type of parental media socialization studied here relates to the accessibility of media assets or resources in the parental home. Although less prominent within cultural reproduction research, the actual possession of cultural assets or products is undoubtedly an indicator of cultural capital (Bourdieu, 1984). Moreover, cultural assets or possessions have been found to be relevant within the process of cultural reproduction, influencing children's cultural behaviors and competencies (Kraaykamp & Van Eijck, 2010; Evans, Kelley, Dikora & Treiman, 2010; Van Peer, 1991). It follows from these and other studies that media provisions in the parental home represent not only access to specific cultural or media assets, they also function as an indicator of parental norms, behaviors and values regarding media use (Chiu & McBride-Chang, 2006; D'Haenens, 2001; Livingstone, 2007). In the remainder of this study media access in the parental home will be referred to as 'parental media resources'.

1.3.3 Parental media guidance: the parent-child interaction perspective

Parents foster their children, often unintentionally, by setting an example, but they may also nurture their children's behaviors purposely by guiding their children's daily activities. Some scholars argue that parents' socialization activities, that is, the intergenerational transmission of skills and behaviors, are only effective if parent-child bonding is of high quality (e.g. Coleman, 1988; Leseman & De Jong, 1998). Bourdieu's cultural reproduction theory is not clear on how exactly parents transmit their cultural values and behaviors to the next generation. The current study deals with this issue by elaborating on the actual socialization process by including parental media guidance activities. For instance, parents may foster their children's reading skills and preferences by reading aloud and by discussing books (Leseman & De Jong, 1998; Schieffelin & Ochs, 1986; Sénéchal & LeFevre, 2002). Parents may similarly actively promote or restrict television viewing, for example, by setting time limits for viewing and discussing television programs (Austin, 2001; Valkenburg et al. 1999). Active parental guidance of children's cultural and media behavior may explain part of the process underlying the intergenerational transmission of cultural codes and norms (e.g. Becker, 2010). Some scholars even argue that parental support and guidance may be more effective than the mere presence of models and materials in stimulating children's development (Sulzby & Teale, 1991; Fender et al., 2010). In the remainder of this study parent-child interaction on media use will be referred to as 'parental media guidance'.

1.3.4 Relation between parental media example, media resources and media guidance

Parental media example, parental media resources and parental media guidance are all indicators of parents' media preferences and perception of media effects. Hence, parents' media example (measured by their media preferences), the media resources in the home and the media guidance that parents offer to their children obviously are interrelated. This study assumes a sequential or causal relationship; that is, parents' media preferences or tastes are believed to lead to investments in certain media assets, but also to lead to specific media-related interactions with their children (D'Haenens, 2001; Nathanson, 2001; Van der Voort, Nikken & Van Lil, 1992; Warren, 2003). The current study contains concrete measures of parents' own media (i.e. cultural) consumption patterns, representing their media taste and preferences, as well as parental media guidance activities. This facilitates study of the extent to which parental media tastes indeed affect their active guidance and commitment to introducing children to the cultural domain.

This study proposes that parents' tastes and routines, that is, parents' unintentional educational role, is relevant for understanding intentional socialization efforts such as guidance activities. First, an important assumption underlying this study is that a person's cultural norms and preferences are rather stable from young adulthood

(Bourdieu, 1984; Lareau, 2003). This obviously gives direction to the causal or sequential order of our model: a person's cultural and media preferences are believed to be already established or stable before he or she becomes a parent. From this time-order or sequential perspective, parental media preferences and behaviors precede all other media socialization activities.

Second, following from pedagogical and child developmental research, parental role construction, values and attitudes are highly relevant in predicting parental involvement in home learning activities and parental media practices (e.g. Hoover-Dempsey & Sandler, 1997; Linebarger & Vaala, 2010). The values parents hold and their goals for their children's academic success and cultural skills are important determinants of their parenting behaviors (Dornbusch et al., 1987; Darling & Steinberg, 1993). This study therefore assumes that parents' own media preferences (i.e. own media behaviors) affect the guidance they offer. For instance, parents who themselves read will be more willing to buy books and to guide their children's reading behaviors (e.g. Bus, Ijzendoorn & Pelligrini, 1995; Evans et al., 2010). Media research also shows that parents' own media preferences are a significant predictor of computer and television access and guidance in the parental home (Nathanson, 2001; Warren, 2003; Livingstone, 2007). Additionally, home media access, such as the number of television sets in the parental home, seems to affect the media guidance that parents offer. For instance, parents provide less guidance on their children's television use in television-rich family homes (Gentile & Walsh, 2002; Van der Voort, Nikken & Van Lil, 1992). Figure 1.2 presents the proposed relation between the three parental media socialization tools.

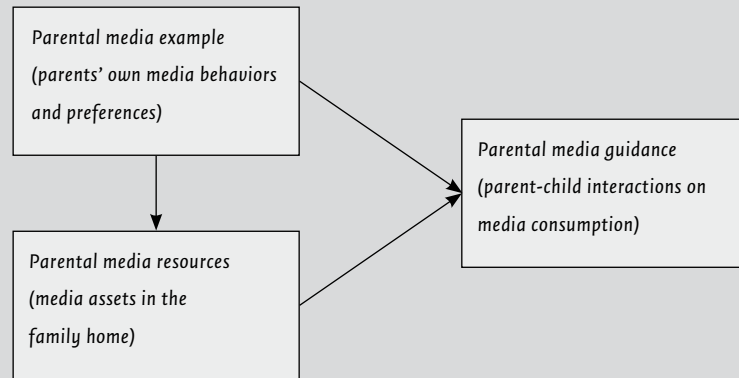


Figure 1.2 Proposed relation between parental media socialization activities

The proposed theoretical model in this study is rather static (see Figure 1.1 and 1.2), and it must be acknowledged that some relations in our model might be bidirectional or vary in intensity at different points in a person's life course or child's socialization period. This is not surprising, since parents and children influence each other (see e.g. Grusec & Davidov, 2010). For instance, parents may occasionally be encouraged by their

children to watch certain television shows. Even more so, parents may intensify their guidance of their children's reading skills or television behavior when school results deteriorate. Nonetheless, this study elaborates on a tradition of research claiming that the intensity and quality of parental involvement in their children's activities is based on parents' own (initial) cultural values and tastes, as well as their goals and norms for their children's socialization (e.g. Hoover-Dempsey & Sandler, 1997; Lareau, 2003).

1.4 Current study

This section presents an overview of the chapters to come, with a brief description of the central research question(s) per chapter. Furthermore, it describes the data employed and measurements used throughout.

1.4.1 Overview of chapters

Chapter 2: social differentiation in parental media socialization

Chapter 2 constitutes a first step in gaining a better understanding of the causes and content of parental media socialization. Before studying the long-term effects of parental media-related socialization activities, it is important to have knowledge about what socialization strategies parents may use. The question is whether all parents use the same media socialization tools. Parents transmit resources, knowledge and skills on to their children, but not all parents value the same issues in nurturing their children. This chapter analyses whether parental social background and family composition, both of which influence parents' socialization activities in general, lead to social differentiation in parental media socialization. The central research question in this chapter reads as follows: *To what extent do parents from different social backgrounds and family compositions differ in their media socialization activities?* In answering this question we test whether parents from different socioeconomic backgrounds exhibit differences in highbrow and lowbrow media behaviors, and whether family compositional aspects, like a working mother or divorced parents, are decisive for the media socialization activities that parents undertake. Moreover, this chapter analyzes the extent to which social differentiation in parental media guidance activities may be explained by parents' media preferences or behaviors (i.e. parental media example).

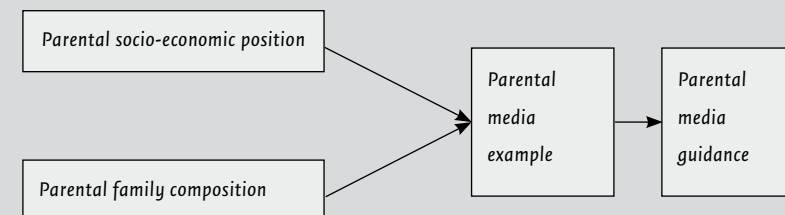


Figure 1.3 Research model chapter 2

Chapter 3: parental media socialization and educational attainment; resource or disadvantage?

The aim of chapter 3 is to gain insight into the extent to which parental media socialization influences children's educational attainment. Media use is central within the family home, and there is ample research on media's effects on children's (anti-) social and emotional well-being (e.g. Engels et al., 2009; Valkenburg, Cantor & Peeters, 2001). Media use in the family home affects children's cognitive skills as well, in both a positive and a negative sense (Bus, Van IJzendoorn & Pelligrini, 1995; Koolstra, Van der Voort & Van der Kamp, 1997). However, there is very little research on the enduring effects of parents' media socialization on their offspring's cognitive development. With media use as a daily activity and predominantly taking place within the family home, it is highly interesting to study whether parental media socialization may benefit or limit children's educational career. The general research question in this chapter then reads: *To what extent do parental media socialization activities affect children's educational attainment?* We expect long-term effects of the parental media example, both regarding time use and content preferences. We similarly expect a continued effect of parental media guidance in childhood on a person's educational attainment. Moreover, we hypothesize that the effect of parental media example is explained by parental media guidance.

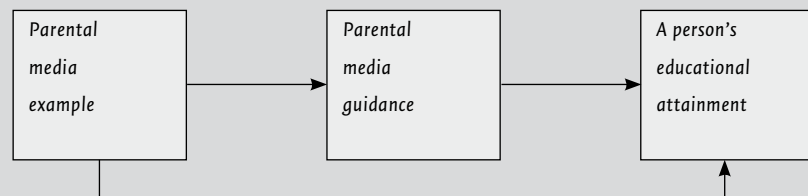


Figure 1.4 Research model chapter 3

Chapter 4: home media and educational success from an international perspective

Central in chapter 4 is a macro or cross-national perspective on parental media socialization effects and children's educational achievement. Information on parents and their children from more than 50 countries is used to study whether access to media resources in the parental home, representing aspects of the in-home media climate, may benefit or hamper children's educational success. Moreover, we expect this relation to be influenced by country characteristics reflecting economic and cultural development. The research question underlying this chapter reads as follows: *To what extent do parental media resources explain differences in children's science performance, and to what extent does a country's level of development affect this relation?* We test expectations on the benefits and limitations of the number of books, televisions and personal computers in the parental home on children's educational success. Moreover, we expect these effects to intensify or diminish along with a country's level of economic prosperity and degree of modernization.

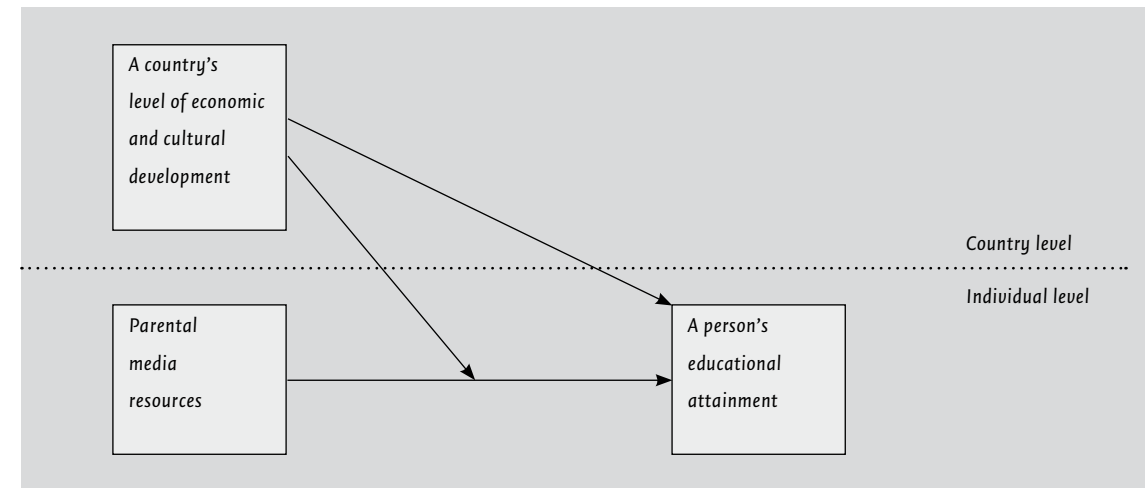


Figure 1.5 Research model chapter 4

Chapter 5: parental media socialization and media taste

Chapter 5 focuses on the process underlying the intergenerational transmission of media taste. Lifestyle and media research clearly indicate that people differ in their media preferences. How does this differentiation in media taste evolve? The main research question of the chapter reads: *To what extent and via what pathways do parental media socialization activities affect a person's current media taste?* To answer this question, hypotheses are formulated integrating aspects of lifestyle theory into social stratification and reproduction theory. Parental media socialization is expected to have a lasting effect on a person's media tastes, and this intergenerational transmission is hypothesized to run via various direct and indirect pathways: parents' media preferences, media guidance activities and children's educational attainment. Central in this chapter is the study of long-term effects of both the media example that parents set and parental media guidance activities on a person's highbrow and lowbrow reading and television taste.

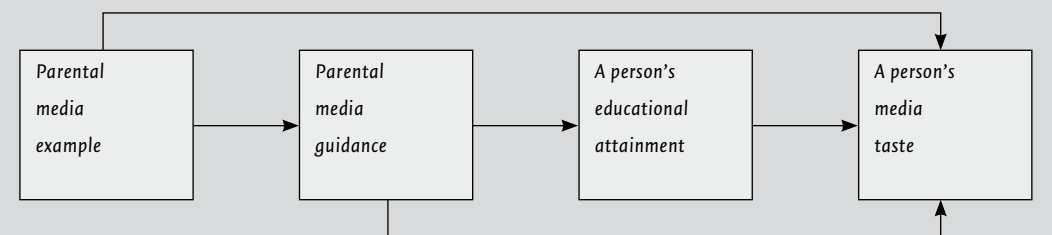


Figure 1.6 Research model chapter 5

Chapter 6: parental media socialization and current weight status

The sixth chapter of this study focuses on media socialization effects and a person's current weight status. Media research has often found television exposure to be an influential factor when it comes to children's social and physical well-being. Particularly the negative effects of television viewing have been studied and corroborated, both due to television's content (e.g. violence, aggressive behavior) as well as its passive or sedentary character. A frequently used argument when it comes to the negative effects of television exposure on children's health is that it may lead to weight gain and obesity. Although studies have substantiated these claims by studying children's television consumption and health behaviors, little is known in this respect about any long-term effects of parental socialization efforts. Therefore, the main research question underlying chapter 6 is as follows: *To what extent and via what pathways do parental television socialization activities affect a person's current weight status?* We hypothesize that parental television socialization during childhood enduringly affects a person's weight status, via individual characteristics like educational attainment and television taste and via a person's weight status in young adulthood.

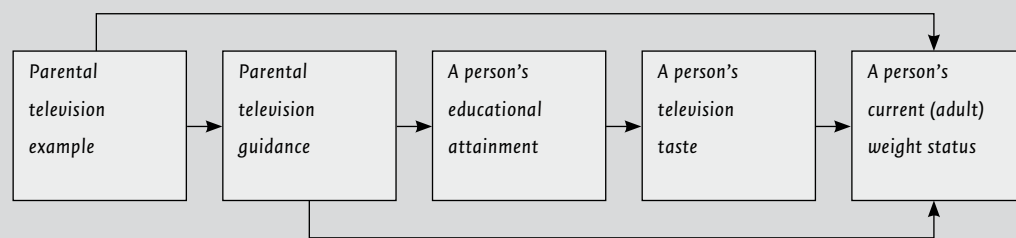


Figure 1.7 Research model chapter 6

Chapter 7: conclusion and discussion

The final chapter summarizes the findings of the previous chapters and draws conclusions about the causes and long-term effects of differentiation in parental media socialization for a child's cognitive, media and health behaviors in adulthood. Limitations of the current study are addressed and suggestions are made for future research and policy.

1.4.2 Data

This study uses two datasets. In chapters 2, 3, 5 and 6, research questions are tested employing the Family Survey of the Dutch Population (De Graaf, De Graaf, Kraaykamp & Ultee, 1998, 2000, 2003; Kraaykamp, Wolbers & Ruiters, 2009). Chapter 4 employs OECD data from the 2006 Programme for International Student Assessment (PISA) (OECD, 2006) for an international comparison of parental media socialization effects.

The Family Survey of the Dutch Population is a cross-sectional survey organized by the Department of Sociology of Radboud University Nijmegen. This study uses four survey waves to answer the research questions posed. Chapters 2 and 3 use FSDP data from 1998, 2000 and 2003; chapter 5 employs the 2003 and 2009 FSDP data; in chapter 6 the 2009 FSDP is used. In all four survey years, respondents were randomly selected from among the adult Dutch population, aged between 18 and 70 years. Both the primary respondent and his or her partner were interviewed. The 2009 FSDP also includes respondents whose partner did not participate. The FSDP poses retrospective questions about the complete educational and occupational career, socialization experiences, family history and other lifetime experiences. Both respondents and partners are questioned via an oral interview and written questionnaire about a broad range of topics regarding their life course and life situation. As such, detailed information is acquired on various socialization activities in the family home during childhood as well as on current characteristics and behaviors. Since partners' socialization experiences most likely took place independently from each other, in the remainder of this study we include primary respondents and their partners both as individual respondents. Cluster corrections were performed to control for possible bias. A unique quality of the FSDP data is that detailed information on socialization and family-specific aspects is obtained retrospectively from the respondent. Hence, this study is able to test the effect of the parental media socialization practices actually experienced during a respondent's childhood. All FSDP waves contain detailed questions on parental media preferences and behaviors, regarding both time consumption and media genres and content. This enables us to measure and analyze the parental media example, which in this study, refers to parents' own reading and television behavior. Several aspects of parent-child interactions on reading and television consumption are retrieved, mostly from the 2003 and 2009 FSDP, providing insight into parental media guidance. Although retrospective data is often argued to be distorted by memory effects or social desirability bias, previous research on the FSDP data shows no significant bias due to systematic and random error for the retrospective measures of parental cultural capital (e.g., De Graaf, De Graaf & Kraaykamp, 2000; De Vries & De Graaf, 2008; Kraaykamp & Van Eijck, 2010). These findings are supported by calculations done in the course of the current study using data gathered from interviews with the parents of a subset of our respondents (FNB 2000, N=319). The international data employed originates from the 2006 PISA (OECD, 2006). This program draws on nationally representative samples of 15-year-old students enrolled in secondary education in 57 countries. The selection of students is based on a two-stage random sampling: first schools are extracted and then respondents are selected. The primary focus of the 2006 PISA was to assess students' knowledge of science. Hence, respondents completed a two-hour test with open and multiple-choice tasks (108 items) measuring science knowledge. In the accompanying half-hour student questionnaire, respondents were asked about their family background and home environment, including the availability of media assets in the parental home, as well as relevant individual characteristics.

1.4.3 Measurements

This study analyzes the effects of several types of parental media socialization: parental media example, parental media resources and parental media guidance. However, measurements of parental media socialization are not available in all years of all the data sources employed. In the FSDP, items are available on parental media example (FSDP 1998, 2000, 2003, 2009) and parental media guidance (FSDP 2003, 2009), whereas the PISA database enables us to measure parental media socialization only by the quantity of media resources present in the parental home.

Highbrow and lowbrow parental media resources and media time use

Although media use is a universal and common leisure activity, not all media resources are equally distributed and consumed among individuals and households. This may be due to economic reasons, but as set out earlier in this study, it is especially because of the perceived favorable social and cognitive aspects associated with specific media resources. For instance, a positive reading climate in the parental home, which may be represented by the number of books present in a household, is socially rewarded, as it generates cognitive and language competencies (Leseman & De Jong, 1998; Cook-Gumperz, 1973; Evans et al., 2010). So, time spent reading and in the presence of books at home holds a rather high social value status. This study measures *parental reading time* in the FSDP data by taking the sum of respondents' reports of the intensity of the father's and the mother's reading of six book genres. Answer categories were (o) 'never' (1) 'sometimes' (2) 'often'. The PISA database holds a measure of the *number of books in the parental home*: students reported the quantity of books present in their home. Answer categories were (o) 0-10 books, (1) 11-25 books, (2) 26-100 books, (3) 101-200 books, (4) 201-500 books and (5) more than 500 books.

Generally, television viewing is considered to have a low status value and to provide little cognitive stimulation (e.g. Schmidt et al., 2008). Hence, the number of televisions in the home and the time spent viewing television likely detract from a person's social status and cognitive development. In the chapters to come, *parental television time* is measured by respondents' reports in the FSDP datasets on how much time their parents watched television. Answer categories were (o) 'there was no television', (1) 'parents never watched television', (2) 'parents watched television less than an hour a day', (3) 'parents watched television between one and two hours a day', (4) 'parents watched television between two and three hours a day', (5) 'parents watched television more than three hours a day'. The *number of televisions in the parental home* was probed in the PISA data with the following question: how many televisions are there in your home? Students could answer with (o) 'none', (1) 'one', (2) 'two' or (3) 'three or more'. Opinions on computer and internet use are mixed, especially when it concerns children. Nevertheless, computer and internet access as well as digital skills are regarded as beneficial or at least as necessary for full participation in modern society (Castells, 2001; Livingstone, 2002). The

PISA survey asked students to report the number of computers in the parental home. Answer categories were (o) 'none', (1) 'two' and (3) 'three or more computers available at home'.

Highbrow and lowbrow parental media content preferences

Media sources differ in their perceived status and beneficial effects, but the content of media exposure and consumption varies as well. Here the parental media example is studied by looking at parents' own book reading and television viewing, both with respect to time aspects and content preferences, and again, we differentiate between highbrow and lowbrow reading and television preferences. Highbrow or serious media content is assumed to be more cognitively stimulating, and its use is thought to confer a higher social status than lowbrow or popular media content. As argued before, the latter may even be regarded as diminishing social status. Parental media example, as in content preferences, is probed in the FSDP. In the remainder of this study *parental highbrow book reading* measures both father's and mother's reading of (a) Dutch or translated literature, (b) novels in a foreign language and (c) popular science books at the time the respondent was around 15 years old. Answer categories were (o) 'never', (1) 'sometimes' and (2) 'often'. *Parental lowbrow book reading* represents father's and mother's reading of (a) detective, science fiction and war novels and (b) romantic novels. *Parental highbrow television viewing* indicates whether the parents watched (a) informative television programs and (b) cultural-artistic programs during the respondents' youth. *Parental lowbrow television viewing* indicates the frequency of watching entertaining television content measured by viewing frequency of four types of television programs: (a) films and series, (b) live or game shows, (c) sports and (d) soap operas. Again, answer categories were (o) 'never', (1) 'sometimes' and (2) 'often'.

Parental media guidance

In this thesis parental media guidance refers to reading guidance and television guidance, both of which are probed in the FSDP. Note that questions on parental television guidance were included only in the FSDP of 2003 and 2009. Parents may actively foster their children's reading skills and preferences. In this study *parental reading guidance* was measured by five items on parent-child reading interaction: (a) 'As a toddler I was read to by one of my parents', (b) 'For my birthday/on Christmas/from Santa Claus 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 (o) 'never', (1) 'sometimes' and (2) 'often'. The measurement of parental television guidance is based on respondents' reports on nine specific parental television guidance activities when the respondent was between 5 and 12 years of age. Following media research on family communication and parental mediation of children's media use, this study differentiates between three parental television guidance activities: parental restrictive guidance, instructive guidance and covieing (e.g. Bybee, Robinson & Turow, 1982; Nathanson, 1999; Valkenburg et al., 1999; Van der Voort, Nikken & Van

Lil, 1992). Parental television guidance was measured by respondents' reports on nine parental television guidance activities when the respondent was between 5 and 12 years of age. Answers were given on a 4-point scale ranging from (0) 'entirely untrue' to (3) 'entirely true'. *Parental restrictive television guidance* was constructed using three items: (a) 'My parents limited the number of hours I was allowed to watch TV', (b) 'My parents decided what TV programs I could watch' and (c) 'My parents had a specific TV timetable for the children'. *Parental instructive television guidance* was constructed by taking the mean score of (a) 'My parents discussed with me why something seen on television was wrong', (b) 'In our family television programs were often discussed' and (c) 'My parents helped me to understand what I saw on television'. Respondents' reports on *parental television coviewing* refer to three items: (a) 'I often watched together with my parents a television show we both liked', (b) 'With my parents I could laugh about something on TV' and (c) 'I often watched together with my parents television programs we both were interested in'.

1.4.4 Selections

The current research requires respondents who were able to experience actual parental television socialization during childhood. Television was introduced in the Netherlands around 1955, but broadcasting became regular only in the mid-sixties. Therefore, FSDP respondents born before 1955 and respondents without a television in their home during childhood are probably unable to answer questions about television-related socialization. For that reason, we selected respondents born from 1955. Also, to ensure that a person's socialization was completed, individuals still living with (at least one of) their parents were removed. In the chapters which include respondents' educational level in the analyses, respondents older than age 24 were selected to obtain a sample of people who had completed daytime education.

1.4.5 Summary

To summarize, the remainder of this thesis presents extensive studies on possible causes of differentiation in and lasting consequences of parental media socialization. The first research question of this study is central in chapter 2, which examines the extent of social differentiation in several parental media socialization activities. The focus from chapter 3 onwards is on answering the second research question, that is, studying long-term effects of different parental media socialization activities on several terrains. Chapters 3 and 4 analyze lasting effects of different types of parental media socialization on a child's educational success, from both a Dutch and an international perspective. Chapter 5 focuses on the intergenerational transmission of media taste and its underlying process. Chapter 6 looks at a person's current weight status in relation to parental television socialization activities during childhood. Chapter 7 discusses the main findings and conclusions, as well as implications for future research and policy.

2 Social differentiation in parental media socialization³

2.1 Introduction

A large body of theoretical and empirical research in the social sciences demonstrates the dominance of conditions within the parental home in predicting the well-being and success of children (Bennet et al., 2002; Bianchi & Robinson, 1997; Coleman, 1988; De Graaf, De Graaf & Kraaykamp, 2000; Fiese et al., 2002). Parents furnish their children with skills, competencies and resources, but this parental socialization differs both in quality and in quantity among social groups. As a result, children tend to be unequally endowed with beneficial competencies. This chapter focuses on parental in-home media socialization activities that may be beneficial or disadvantageous in children's upbringing. Parents may nurture their children with prestigious or cognitively stimulating reading and television viewing, but they might also transmit less socially valued or non-stimulating media habits to their offspring (Austin, 2001; Bus, Van Ijzendoorn & Pelligrini, 1995; Kraaykamp, 2003; McLeod & Brown, 1976; Nathanson, 1999; Verboord & Van Rees, 2003). Here social differentiation in experienced parental media socialization is studied, and we expect social background and family composition to be relevant explanatory factors. Research has shown that families with high socioeconomic status have more cultural, social and cognitive resources to help their children "conquer the world" than low-status families. Consequently, parents from privileged social backgrounds are more successful in equipping their children with beneficial resources (Bourdieu, 1984; De Graaf, De Graaf & Kraaykamp, 2000; Lareau, 2003). Another factor influencing parental socialization activities is a family's composition. The intensity and quality of parent-child interaction has been found to be affected by factors like a parental divorce and the mother's employment status (Coleman, 1988; Sandefur, McLanahan & Wojtkiewicz, 1992). Consequently, the first research question in this chapter reads: *To what extent do parents from (a) various social backgrounds and (b) various family compositions differ in their media socialization activities?*

Among media socialization practices, we distinguish parental media preferences (i.e. the parental media example) from parental media guidance, and we assume a causal relation between the two. Following prior research, we consider it likely that parents' own media preferences will affect the efforts they undertake in guiding and coaching their offspring's media consumption (Darling & Steinberg, 1993; Lareau, 2003; Nathanson, 2001; Van der Voort, Nikken & Van Lil, 1992). Thus, the second research question in this chapter is stated as follows: *To what extent do parental media preferences explain differences in parental media guidance activities?*

³ A slightly different version of this chapter was published as: Notten, N. & Kraaykamp, G. (2009). Parents and the media. A study of social differentiation in parental media socialization. *Poetics*, 37 (3): 185-200.

The current research is innovative for a number of reasons. First, it makes theoretical and empirical contributions to research on the reproduction of cultural resources. Here we study primarily the media aspects of cultural socialization rather than the elitist cultural outings that are traditionally investigated in cultural reproduction research. Moreover, we take both parental social background and family composition into account. Second, our research explicitly acknowledges parents' roles as both intentional and unintentional educators when it comes to reading and television-viewing habits. We therefore study the parental example and parental guidance activities separately. Third, we study the actual socialization achieved by respondents making use of retrospective measurements. Most media studies focus on the current situation when children are still living in the parental home (e.g. Livingstone, 2007; Gentile & Walsh, 2002; Valkenburg, Cantor & Peeters, 2000). This may, however, lead to an overvaluation of the situation at the time of the interview. Our data contain respondents' reports of completed parental media socialization; respondents no longer lived in the parental home. Fourth and finally, we use three waves of the Family Survey of the Dutch Population (De Graaf, De Graaf, Kraaykamp & Ultee, 1998, 2000, 2003), employing information on 2,608 adult Dutch respondents who reported their socialization experiences. This should produce conclusions on parental media socialization concerning people from birth cohorts ranging from 1955 to 1984.

2.2 Theory and hypotheses

2.2.1 Parents and media socialization

Previous research has shown that parents contribute to a child's development in at least two major domains (Snow et al., 1991). First, parents' provision of a safe environment is a precondition for successful development. Second, and more importantly for our study, parents fulfill the role of educators, undertaking various socializing activities to guide their children's behavior. Furthermore, we believe it is relevant to acknowledge that parents may carry out their educational task both unintentionally and intentionally (Bandura & Walters, 1963; Bennet, Weigel & Martin, 2002; Kraaykamp, 2001, 2003; McLeod & Brown, 1976; Valkenburg, Krmar, Peeters & Marseille, 1999). Children may learn by imitating their parents' daily behaviors, in which case these parents foremost are unintentional educators. Parents are intentional educators when they are actively instructing their children. Without a doubt, children imitate or incorporate parental examples best when behaviors are frequently exhibited and underlined. Because media is often consumed in the family home, we assume that this is true for parental media behavior and media instruction activities.

We focus on parental media socialization activities that are beneficial and those that are disadvantageous to children in terms of nurturing the cultural competencies that potentially enhance a child's success in life. Therefore, central in this study is

parental 'highbrow' and 'lowbrow' media socialization. Highbrow media socialization activities refer to cognitively stimulating and socially rewarded (high status) parental behaviors that may benefit a child's development, such as literary reading and watching informational television programs. Lowbrow media socialization constitutes the possibly disadvantageous parental example of hardly stimulating and low valued media use, like watching soap operas on television and reading romantic novels. We differentiate two key factors that cause diversity in parental media socialization practices, namely, parental social background and family composition.

2.2.2 Social background and parental media socialization

Research has shown that media and cultural socialization activities are affected by the parents' own social background (Lareau, 2003; Livingstone, 2002; Roe, 2000; Van Eijck, 1997). Stratification research has traditionally used educational level and occupational status as indicators of social background. Occupational status refers to a family's class or position (its economic and symbolic resources) and educational level represents its cultural capital (intellectual and cognitive abilities). In studying the influence of parents' social background on their media socialization activities we take both educational level and occupational status into account.

Two lines of research dominate the study of intergenerational transmission of cultural and media behaviors. First, within lifestyle research on cultural and media consumption a significant role is assigned to a person's cultural competency. From information theory (Ganzeboom, 1982) it follows that parents with a higher education have a higher level of cognitive skills and cultural competency. They will subsequently be attracted to more complex (highbrow) media resources and media content than lower educated parents. By the same reasoning, Rosengren (1989) states that media use is a mental activity and is predicted by the cognitive training one has experienced. Indeed, research has found that higher educated people read more highbrow literature and consume more culturally oriented television content than lower educated respondents (Kraaykamp, 2001; Roe, 2000; Van Eijck & Van Rees, 2000). It therefore seems reasonable to assume that children from higher educated parents are more familiar with parental highbrow media consumption and confronted less with parental lowbrow media use than children whose parents have a lower educational level.

Second, from a neo-Weberian point of view, social class is assumed to play a distinct role when it comes to (parental) media preferences and behaviors. This research line views social status as a determinant of a person's access to scarce resources and interests. By demonstrating a particular lifestyle based on the amount of accessible cultural and material resources, members of a status group confirm the existing boundaries between classes in society (Bourdieu, 1973, 1984). Consuming highbrow media content confers more prestige and is more common among higher social status groups than lowbrow media use. In the higher social strata, literary reading as well

as watching cultural and informative television programs generally are regarded as respected activities. Consequently, children from higher status families are far more exposed to a highbrow and beneficial parental media example than children from lower status families. In contrast, lowbrow media content, such as soap operas and romantic novels, is thought to confer low or negative esteem and is generally associated with low status (Beentjes, Koolstra, Marseille & Van der Voort, 2001; Kraaykamp, 2001; Roe, 2000). We argue that by setting an example and functioning as role models through their daily media behaviors, parents unintentionally transmit their media preferences to their children. Hence, when we combine the abovementioned two lines of research our first hypothesis reads: *parents with (a) a higher educational level and (b) a higher occupational status use more highbrow media content and less lowbrow media content than parents with (a) a lower educational level and (b) a lower occupational status.*

It is reasonable to assume that there is also a relation between parental social background and intentional parental socialization activities, such as media guidance or mediation. Parents with a higher educational level generally possess better linguistic and cultural skills and are cognitively well trained. They are consequently more aware of the possible risks and benefits of exposure to specific media. Therefore, these parents are probably more inclined and better equipped to educate their children in beneficial media use than less educated parents. In general, well-educated parents seem to invest more time in activities that stimulate their children's cognitive development (Bianchi & Robinson, 1997; Lareau, 2003). To give their offspring the best possible start in life, culturally competent parents are thus expected to intentionally invest a substantial amount of time in cultivating their children's cultural competencies. With respect to the media, previous research has associated parental educational level with the provision of literacy opportunities and promotion of literacy in the home (Leseman & De Jong, 1998). It has also found parents with a high socioeconomic status to be more likely to set television-viewing rules and to discuss media content more frequently with their children than parents from lower status households (Pasquier, 2001; Valkenburg et al., 1999; Vandewater, Huang & Wartella, 2005a). Our second hypothesis thus states: *parents with (a) a higher educational level and (b) a higher occupational status guide their children's media use more actively than parents with (a) a lower educational level and (b) a lower occupational status.*

2.2.3 Family composition and media socialization

With respect to children's socialization and upbringing, research has established that not only is parental social background of importance, a family's composition makes a difference as well (Powell, Steelman & Carini, 2006; Sandefur, McLanahan & Wojtkiewicz, 1992). Coleman (1988) argues that the transmission of parental resources depends on parent-child bonding and interaction. When in certain families contact between parent and child is limited, parental socialization activities (both intentional and unintentional) are likely to occur less frequently. Research on parental investment

in childrearing has shown several family composition factors to be related to parents' time spent with children (Sayer, Bianchi & Robinson, 2004). We study four family factors in relation to parental media socialization.

First, within a divorced (single-parent) household, necessary tasks and paid labour are more likely to cause a time squeeze. Among the consequences of a divorce is the reduction of (quality) time for the single parent to spend on media consumption or to invest in guiding children's reading abilities and television consumption. Children with married or cohabiting parents may benefit from two adults, who can bundle their resources and use their family time complementarily (Pasquier, 2001; Sayer, Bianchi & Robinson, 2004). Our third hypothesis thus reads: *divorced parents use (a) less highbrow media content, (b) less lowbrow media content and (c) guide their children's media use less actively than married parents.*

Second, the mother's age at the birth of a child seems to be a relevant predictor of successful accumulation and reproduction of resources (Powell, Steelman & Carini, 2006). Delayed childbearing is usually a conscious choice and results in older mothers. In general, older mothers have chosen motherhood intentionally, and are therefore more predisposed to invest time in their children. Research has revealed that, controlling for parental social background, older mothers provide a more nurturing, cognitively stimulating, supportive and stable home than young mothers. Therefore, mother's age constitutes an indication of maturity and a proxy for the ability to provide a constructive nurturing and resourceful environment (Fergusson & Woodward, 1999; Kalmijn & Kraaykamp, 2005). Hence, our fourth hypothesis states: *older mothers use (a) more highbrow media content, (b) less lowbrow media content and (c) guide their children's media use more actively than younger mothers.*

As a third aspect that may play a role in family socialization processes, we study the working status of the mother during a person's childhood. Despite the vast increase in women's labour participation and the time fathers spend on child care, research still indicates that mothers invest more time in their offspring than fathers (Pasquier, 2001; Sayer, Bianchi & Robinson, 2004). On the other hand, working mothers obviously have less time to spend on their children's well-being than stay-at-home mothers, and research findings seem to confirm this notion (Warren, 2005; Zick & Bryant, 1996). Research, however, seems inconclusive on the exact effects of the mother's working status on socialization practices. Working mothers are better equipped (e.g. have more cognitive and social skills) to guide their children's development, but they face considerable time restrictions (Zick, Bryant, & Österbacka, 2001). Since we include a parent's socioeconomic resources in the modeling, this study assumes that the mother's working status manifests itself mainly in time restrictions. Hence our fifth hypothesis reads: *working mothers use (a) less highbrow media content, (b) less lowbrow media content and (c) guide their children's media use less actively than non-working mothers.*

Fourth, we study family size, represented by the number of siblings in a household. Resource dilution arguments suggest that the more siblings there are with whom

parental resources have to be shared, the less is left for each individual child. This dilution is predicted to work with regard to human and financial resources, as well as when it comes to parental attention and parenting time (Blake 1981; Coleman 1988). When there are more children, parents have to divide time and attention among their offspring and have less leisure time. The (quality of) time and activities parents spend in the light of media socialization thus decrease with a greater number of siblings. Recent research, however, has shown that family size does not negatively affect the frequency with which mothers read to their children; a possible explanation is that reading aloud can be done simultaneously with multiple siblings (Zick, Bryant, & Österbacka, 2001). Nevertheless, from the child's (i.e. respondents') point of view we expect a large number of siblings to negatively affect the parental media socialization experienced by each individual child. Our sixth hypothesis thus reads: *within larger families, parents use (a) less highbrow media content, (b) less lowbrow media content and (c) guide their children's use less actively than in smaller families.*

2.2.4 Parental media preferences and media guidance

Past research on cultural reproduction has indicated that apart from parental social background, parental cultural consumption is an important determinant of a person's cultural competency and educational attainment (De Graaf, De Graaf & Kraaykamp, 2000; Van Eijck, 1997). However, in the process of cultural reproduction actual guidance activities have often been disregarded, so research remains unclear about how exactly parental cultural behaviors are reproduced into the next generation. In line with prior research we here assume that parents' own media behaviors or preferences lead to specific parent-child interactions on media use (e.g. Barkin et al., 2006; Nathanson, 2001; Gentile & Walsh, 2002; Van der Voort, Nikken & Van Lil, 1992). In the current study we have concrete measures of parental media guidance activities, which makes it possible for us to study the extent to which parental media preferences indeed cause active guidance and commitment in introducing children to the cultural domain. Moreover, parents with more complex and high status media preferences are likely not only more critical in their own media consumption, they probably are also more selective and demanding when it comes to their children's media use (e.g. Lareau, 2003; Livingstone, 2007). We therefore expect parents with a strong preference for highbrow media content to be more actively involved in guiding their children to beneficial media use than parents who themselves favor entertaining and non-cognitively stimulating media content. Our seventh hypothesis thus states: *the more frequently parents use highbrow media content, the more actively they guide their children's media consumption.* Alternatively, our eighth hypothesis reads: *the more frequently parents use lowbrow media content, the less actively they guide their children's media consumption.* In this respect it seems likely that the social background effects on parental media guidance will be mediated by parents' own media behaviors (i.e. the parental media example).

2.3 Methodology

2.3.1 Data

To test our hypotheses we employ three waves of the Family Survey of the Dutch Population (FSDP), conducted in 1998, 2000 and 2003 (De Graaf et al., 1998, 2000, 2003). The actual number of respondents in the three surveys was 2,029 in 1998, 1,561 in 2000 and 2,174 in 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. A major advantage of the FSDP is that beside a primary respondent his/her partner is also interviewed. Since the media socialization of primary respondents and their partners took place independently, we chose to include each as individual respondents. The FSDP holds information on several aspects of individuals' life course. To ensure that respondents' socialization had been completed, we removed individuals living with (at least one of) their parents (5.0%). In the Netherlands, television was introduced around 1955. For respondents born before 1955 and respondents reporting that there was no television set in their home during childhood (44.6%), questions about television-related socialization obviously were void. We therefore excluded these respondents. As a result, we analyze people from birth cohorts between 1955 and 1984.

2.3.2 Measurements

We studied six distinct parental reading and television viewing socialization activities, referring to the time the respondent was between ages 5 and 15. Respondents reported on five types of parental book reading, and factor analyses confirmed a highbrow and lowbrow reading dimension.⁴ We measured *parental highbrow book 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 when the respondent was around 15 years old. Answer categories were (0) 'never', (1) 'sometimes' and (2) 'often'. We standardized all items and constructed a scale by taking the mean scores. The variable parental highbrow reading was standardized by ranking the scores into percent points (between 0 and 100). Respondents' reports on *parental lowbrow book reading* refer to fathers' and mothers' reading (a) detective, science fiction or war novels and (b) romantic novels. Answer categories were again (0) 'never', (1) 'sometimes' and (2) 'often'. The variable parental lowbrow book reading was standardized by ranking the scores into percent points (between 0 and 100).

4 For fathers, reading 'detective novels, science fiction and war novels' loaded on both dimensions. On theoretical grounds and because popular reading after removing detective novels was measured only by reading romantic novels (which is done most frequently by women) we decided to assign this genre to lowbrow reading.

A confirmative factor analyses on six types of television programs established a highbrow and lowbrow dimension for television viewing.⁵ For the construction of *parental highbrow television viewing* we took the mean of two items, (a) parents watching informative programs and (b) parents watching cultural-artistic programs when the respondent was 15 years old. Answer categories were (0) 'never', (1) 'sometimes' and (2) 'often'. Standardization took place by ranking the scores between 0 and 100. *Parental lowbrow television viewing* was measured by four items reflecting lowbrow television programs that parents watched: (a) films or series, (b) game shows, (c) sports and (d) soap operas. 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 constructed taking the mean of the four items. The variable parental lowbrow television viewing was transformed into percent points employing a ranking procedure.

Parental reading guidance was measured by the following five statements on parent-child reading activities: (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'. A scale was constructed by taking the mean score of the five items after standardization ($\alpha=.82$). The variable parental reading guidance was standardized by ranking the scores into percent points.

Parental television guidance, in this chapter probed only in the FSDP 2003, was represented by nine indicators of parental television guidance when the respondent was between 5 and 12 years of age. These indicators represent three forms of parental television mediation or guidance: restrictive guidance, strategic or instructive guidance and covieing (Nathanson, 2001; Valkenburg et al., 1999). We performed a confirmatory factor analysis, revealing that the indicators indeed represent the three theoretically expected types of parental television guidance (i.e. mediation). Answers were given on a 4-point scale ranging from (0) 'entirely untrue' to (3) 'entirely true'. *Parental restrictive television guidance* was measured by the mean score of the following three items: (a) 'My parents limited the hours I was allowed to watch TV', (b) 'My parents decided what I could watch on TV' and (c) 'My parents had a specific TV timetable for the children' ($\alpha=0.74$). We constructed *parental instructive television guidance* by taking the mean of (a) 'My parents discussed with me why something seen on television was wrong', (b) 'In our family television programs were often discussed' and (c) 'My parents helped me to understand what I saw on television' ($\alpha=0.75$). Respondents' reports on *parental television covieing* refer to three items: (a) 'I often watched together with my parents a television show we both liked', (b) 'With my parents I could laugh about something

on TV' and (c) 'I often watched together with my parents television programs we both were interested in' ($\alpha=0.77$). Scales were created taking average scores, and were standardized between 0 and 100 employing a ranking procedure.

We control for parental social background which refers to parental educational level and occupational status. *Parental educational level* is measured as the number of years required to obtain the educational level concerned, and ranges from 6 years (primary school) to 21 years (PhD) (De Graaf, De Graaf & Kraaykamp, 2000). To construct parental educational level we took the maximum of the respondent's father's and mother's completed educational level. We measured *parental occupational status* by taking the maximum of the father's and mother's ISEI score of their occupation when the respondent was aged 15 (Ganzeboom, De Graaf & Treiman, 1992).

Four indicators for family composition were taken into account. The questionnaire asked whether the parents were divorced, and if so, in what year. We constructed a *parental divorce* variable that indicated whether parents were divorced during a respondent's childhood (ages 0-12), with answer categories (0) no parental divorce and (1) parental divorce. *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 (10 cases), topping down exceptionally old mothers to the age of 45 (10 cases). We centered this variable to the mean (29 years). Two questions were used to measure whether a respondent had a *working mother*, namely (a) 'Was your mother employed for at least one year during preschool?' and (b) 'Was your mother employed for at least one year during primary school?' We constructed a variable that indicates whether the mother was either (0) non-working or (1) working during the respondent's childhood. *Family size* represents the total number of siblings in the family, including the respondent. We leveled it down to a maximum of eight siblings (for 4.8% of the respondents). Finally, we controlled for sex and birth year. The variable *sex* indicates whether the respondent (child) is a (0) male or (1) female. *Birth year* is a continuous variable ranging from 1955 to 1984, and indicates the birth year of the respondent (child). Respondents with a missing score on one of the selected (in)dependent variables were removed (13.7%). Our resulting dataset contains 2,608 individuals. Our analysis of social differentiation in parental television guidance makes use of the 2003 FSDP data only. In this case, the dataset contains 1,155 individuals. Table 2.1 presents a detailed description of the variables.

⁵ Sports loaded a fraction higher on the popular dimension. Because of the popularity of these programs (around 50% watches often) and the limited cultural content of sport programs, this item was assigned to the popular dimension.

Table 2.1 Descriptive statistics of all variables

	Minimum	Maximum	Mean	Std. Deviation
Parental media socialization				
Parental highbrow book reading	0.36	99.98	50.02	28.72
Parental lowbrow book reading	0.33	100.00	50.02	28.73
Parental highbrow television viewing	0.59	97.55	50.02	27.12
Parental lowbrow television viewing	0.36	99.23	50.02	28.85
Parental reading guidance	1.42	97.62	50.02	28.85
Parental instructive television guidance ^a	1.90	98.74	50.04	28.76
Parental restrictive television guidance ^a	1.51	96.41	50.04	28.83
Parental coviewing ^a	0.43	92.77	50.04	28.58
Parental social background				
Parental educational level	6.00	21.00	10.5	3.33
Parental occupational status	10.00	90.00	46.82	16.03
Family composition				
Parental divorce (1=divorced)	0	1	0.05	
Mother's age at childbirth (29=0)	-13.00	16.00	-0.48	5.78
Working mother (1=working)	0	1	0.32	
Family size	1.00	8.00	3.39	1.68
Control variables				
Respondents' birth year (1955=0)	0.00	30.00	10.36	6.48
Respondents' sex (1=female)	0	1	0.53	

Source: FSDP 1998, 2000, 2003; N=2,608

^a FSDP 2003 only (N=1,155)

2.3.3 Modeling strategy

For each of the four types of parental media example we estimated two OLS regression models. The first model contains the control aspects and the parental social background variables. The second model adds the family composition variables. Additionally, for parental reading and television guidance we estimated a third model in which the parental media example is included as a predictor. We present unstandardized and standardized regression coefficients in Table 2.1. Bivariate correlations are shown in Appendix 1.

2.4 Results

2.4.1 Results for parental media example

Table 2.2 presents the results for parental book reading and television viewing. Model 1 shows that respondents from younger generations report less parental highbrow reading than respondents born in the older cohorts. For gender, the results for parental highbrow television viewing stand out ($b=3.2$). Interesting and puzzling is the fact that girls reported their parents watching more highbrow television programs than boys did. This finding may be explained by selective memory effects, but is more likely due to a gendered socialization with respect to media use.⁶

In line with our expectation, results confirm that parental highbrow reading and highbrow television viewing are found more often among higher educated parents; each additional year of parental education leads to an increase of 3.7 percent points in literary reading and 1.7 percent points in highbrow television viewing. Moreover, the effects of parental occupational status are in the predicted direction; the higher the occupational status of the parents, the more exposed children are to their parents' highbrow reading and television viewing.

As hypothesized, children with higher educated parents and parents with higher status occupations are less confronted with parental lowbrow television consumption than children from lower status households. In contrast, the results on lowbrow reading content were surprising. Higher educated parents as well as parents with a higher occupational status were reported to read more lowbrow content than less culturally competent and lower status parents. These findings contradict our expectations, and might reflect the generally higher and elite status of reading activities compared with the lowbrow and less valued status of television viewing.

Model 2 adds family composition aspects; most remarkable here is that the effects of social background have hardly changed. Both social background and family composition have independent effects on all parental media behaviors, with the exception of parental literary reading. Experiencing a parental divorce and having a working mother seem unrelated to parental highbrow media use. Still, we do observe that having an older mother is advantageous when it comes to setting a more beneficial example in television viewing, and this finding corroborates our hypothesis. Additionally, growing up in a large family reduces the cultural quality of one's television socialization: every additional sibling reduces a parent's highbrow television viewing by 0.9 percentage points.

⁶ For instance, as shown in Table 2.3, girls score significantly higher on coviewing with their parents than boys.

Table 2.2 OLS regression on parental media example of social background and family composition
(standard errors between brackets).

	Parental highbrow book reading				Parental highbrow television viewing				Parental lowbrow book reading				Parental lowbrow television viewing			
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
	B	β	B	β	B	β	B	β	B	β	B	β	B	β	B	β
Control variables																
Respondents' birth year (1955=0)	-.186	-.042 *	-.183	-.041 *	-.101	-.024	-.055	-.013	.051	.012	-.101	-.023	.126	.028	-.011	-.002
	(.076)		(.080)		(.081)		(.085)		(.087)		(.092)		(.087)		(.092)	
Respondents' sex (1=female)	.582	.010	.575	.010	3.200	.059**	3.254	.060 **	.650	.011	.422	.007	1.678	.029	1.490	.026
	(.962)		(.963)		(1.026)		(1.020)		(1.106)		(1.098)		(1.104)		(1.100)	
Parental Social background																
Parental educational level (6-21)	3.727	.432 ***	3.727	.432 ***	1.666	.204 ***	1.656	.203 ***	1.335	.155 ***	1.315	.152 ***	-1.379	-.159 ***	-1.403	-.162 ***
	(.189)		(.190)		(.202)		(.201)		(.218)		(.216)		(.217)		(.217)	
Parental occupational status (10-90)	.255	.142 ***	.251	.140 ***	.160	.095 ***	.148	.088 ***	.129	.072 **	.111	.062 *	-.186	-.103 ***	-.202	-.112 ***
	(.039)		(.039)		(.041)		(.041)		(.044)		(.044)		(.044)		(.044)	
Family composition																
Parental divorce (1=divorced)			-.299	-.002			-.757	-.006			-7.750	-.059 **			-4.243	-.032
			(2.227)				(2.360)				(2.540)				(2.544)	
Mother's age at childbirth (29=0)			.113	.023			.584	.124 ***			-.264	-.053 *			-.214	-.043 *
			(.090)				(.095)				(.102)				(.102)	
Working mother (1=working)			1.017	.017			-.475	-.008			.557	.009			.910	.015
			(1.061)				(1.124)				(1.210)				(1.212)	
Family size (1-8)			-.060	-.004			-.850	-.053 *			-1.612	-.094 ***			-1.337	-.078 ***
			(.324)				(.343)				(.369)				(.370)	
Constant	.576		.648		24.381 ***		27.889 ***		29.067 ***		37.397 ***		71.004 ***		77.899	
	(1.811)		(2.423)		(1.932)		(2.567)		(2.083)		(2.764)		(2.079)		(2.768)	
Adj. R ²	.276		.276		.075		.088		.043		.058		.055		.063	
Number of cases	2,608				2,608				2,608				2,608			

Significance: *p<.05, **p<.01, ***p<.001; Source: FSDP 1998, 2000, 2003.

Family composition seems to be an influential factor in parental lowbrow media example. Remarkably, children from divorced families are significantly less exposed to parents reading popular content than children in two-parent families ($b=-7.8$). Apparently, time pressure limits a divorced parent's lowbrow reading. For both reading and television viewing our results show, as we expected, that older mothers are less attracted to popular content than younger mothers. More pronounced positive norms towards a cognitively stimulating home environment, combined with time pressure aspects, might play a role here. Children from larger families report less television viewing and parental popular reading than children from smaller families. More restrictive family situations, represented by growing up in large families and in divorced families, apparently hardly affect experienced parental highbrow media consumption, but do significantly reduce parental lowbrow media consumption. This difference is especially profound for reading. Higher status parents read a variety of books, but it appears that when they are under time pressure, they prefer highbrow content reading material.

2.4.2 Results for parental media guidance

Table 2.3 presents the regression models for parental media guidance. Model 1 shows that younger respondents experienced more reading guidance and less parental television rules than respondents from the older birth years. In contrast, the intensity of parental instructive television guidance and parental coviewing seems more or less constant over time. Next, Model 1 clearly demonstrates the gendered nature of reading. Girls report that parents guide their reading behavior substantially more than boys ($b=8.6$). Since reading guidance is an interactive parent-child activity, gender-specific socialization might be a possible explanation here. Note that in television guidance, only for parental coviewing significant gender differences were observed ($b=4.9$). In Model 1, with regard to the effects of social background, it seems clear that parental media guidance is socially differentiated. Respondents with higher educated parents generally do report more guidance activities, both in reading and television viewing, compared to respondents with lower educated parents. Each additional year of parental education raises parental reading guidance by 2.2 percent points, television instruction by 1.0 percent points and parental television restrictions by 1.4 points. Parental coviewing, however, seems not affected by parental social background. Next, parental occupational status affects parental reading guidance as well. When parents have a higher occupational status, respondents report significantly higher odds of parental reading guidance ($b=0.3$). All in all, high status parents seem to pay significantly more attention to providing reading guidance. Comparing parental reading and television guidance, it is remarkable to find that social background is far more important for reading guidance than for parent-child interaction on television viewing. Once more, our results suggest that reading might be more of a socially distinguishing practice for higher status parents than television viewing.

The results of Model 2 in Table 2.3 show the significant effect of family composition on parental media guidance. Again, the effects of parental social background are hardly affected by the introduction of family composition features. Divorce seems to restrict parental guidance of children's media activities. Children from divorced families report significantly less guidance on reading ($b=-6.2$), less television instructions ($b=-10.7$) and less parental coviewing ($b=-11.3$). Growing up in a large family also limits parental interaction. With every additional sibling, parental reading guidance decreases by 2.5 percent points. Moreover, the intensity of parental instructive television guidance ($b=-2.5$) and coviewing ($b=-2.7$) tends to decrease as well when a family expands. Hence, the dilution hypothesis, asserting that in smaller families parents have more time to spend on each individual child, is confirmed. Note that older mothers are reported to coview with their children more often than younger mothers. For the intensity of parental restrictive television guidance, a family's composition seems to have no meaning. This likely indicates that applying television rules is a hardly time demanding socialization activity.

Model 3 adds parental reading and television viewing as additional predictors. We suggested that parents' own media preferences would influence their guidance behavior, thereby partly interpreting social background effects on parental media guidance. From the results of Model 3, we must first conclude that family composition effects are hardly changed by the introduction of parental reading and television viewing. Second, the effects of parental media example are highly significant and partially meet our expectations. For reading guidance, results show that parents who themselves read are also more inclined to interact on their children's reading behavior. This is true regardless of the genres these parents prefer. Reading guidance is also affected by the television preferences of parents. Whereas watching highbrow television positively affects reading guidance, parental lowbrow television viewing limits parent-child reading interaction. Apparently in families where parents favor lowbrow television content, children's reading habits are significantly less stimulated. We further find that parents who prefer highbrow reading and television content tend to guide their children's television consumption more intensively than parents who consume less informational and cultural media content. Remarkably, parental coviewing is stimulated by parental highbrow and lowbrow television viewing, suggesting that coviewing is a common social family activity and its effects do not lead per se to more beneficial media skills and knowledge. Our findings furthermore clearly show that parents who favor lowbrow television content are significantly less restrictive regarding their children's television viewing behaviors. Overall, the findings of Model 3 confirm our expectation that observation of parents' preferences and daily behaviors is relevant for understanding intentional socialization activities.

Table 2.3 OLS regression on parental media guidance of social background, family composition and parental media example (standard errors between brackets)

	Parental reading guidance						Parental instructive television guidance					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	B	β	B	β	B	β	B	β	B	β	B	β
Control variables												
Respondents' birth year (1955=0)	.249 (.081)	.056 *	.097 (.085)	.022	.170 (.078)	.038 *	.217 (.122)	.053	.081 (.127)	.020	.134 (.122)	.033
Respondents' sex (1=female)	8.633 (1.029)	.149 ***	8.427 (1.017)	.146 ***	7.746 (.930)	.134 ***	1.947 (1.677)	.034	1.571 (1.664)	.027	1.510 (1.604)	.026
Parental social background												
Parental educational level (6-21)	2.189 (.203)	.252 ***	2.145 (.201)	.247 ***	.587 (.197)	.068	1.036 (.347)	.110 **	1.009 (.344)	.107 **	-.173 (.359)	-.018
Parental occupational status (10-90)	.302 (.041)	.168 ***	.272 (.041)	.151 ***	.153 (.038)	.085 ***	.121 (.067)	.065	.099 (.067)	.053	.041 (.065)	.022
Family composition												
Parental divorce (1=divorced)			-6.210 (2.353)	-.047 *	-5.258 (2.152)	-.040 *			-10.658 (3.776)	-.082 **	-10.226 (3.647)	-.079 **
Mother's age at childbirth (29=0)			.121 (.095)	.024	.014 (.087)	.003			.092 (.154)	.018	-.021 (.150)	-.004
Working mother (1=working)			-.103 (1.121)	-.002	-.335 (1.024)	-.005			1.712 (1.810)	.028	1.243 (1.745)	.021
Family size (1-8)			-2.563 (.342)	-.149 ***	-2.273 (.314)	-.132 ***			-2.453 (.578)	-.137 ***	-1.979 (.564)	-.111 ***
Parental media example												
Parental highbrow book reading					.283 (.021)	.281 ***					.204 (.036)	.201 ***
Parental highbrow television viewing					.166 (.018)	.156 ***					.175 (.032)	.164 ***
Parental lowbrow book reading					.123 (.018)	.122 ***					.030 (.030)	.030
Parental lowbrow television viewing					-.049 (.017)	-.049 **					.014 (.029)	.014
Constant	5.750 (1.937)		18.409 *** (2.560)		12.840 *** (2.742)		30.042 *** (3.308)		41.170 *** (4.244)		33.719 *** (4.852)	
Adj. R ²	.180		.199		.333		.030		.051		.122	
Number of cases			2,608				1,155					

Significance: *p<.05. **p<.01. ***p<.001; Source: FSDP 1998, 2000, 2003.

Table 2.3 (continued) OLS regression on parental media guidance of social background, family composition and parental media example (standard errors between brackets)

	Parental restrictive television guidance						Parental television coviewing					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	B	β	B	β	B	β	B	β	B	β	B	β
Control variables												
Respondents' birth year (1955=0)	-.393 (.123)	-.096 **	-.436 (.129)	-.107 **	-.392 (.127)	-.096 **	.014 (.123)	.003	-.091 (.128)	-.022	-.074 (.125)	-.018
Respondents' sex (1=female)	2.562 (1.687)	.044	2.533 (1.692)	.044	2.807 (1.667)	.049	4.885 (1.688)	.085 **	4.687 (1.672)	.082 **	4.279 (1.640)	.075 **
Parental social background												
Parental educational level (6-21)	1.388 (.349)	.147 ***	1.368 (.349)	.145 ***	.537 (.373)	.057	-.063 (.349)	-.007	-.083 (.345)	-.009	-.330 (.367)	-.035
Parental occupational status (10-90)	-.002 (.067)	-.001	.009 (.068)	.005	-.062 (.068)	-.033	-.041 (.067)	-.022	-.066 (.067)	-.036	-.048 (.067)	-.026
Family composition												
Parental divorce (1=divorced)			1.531 (3.839)	.012	1.735 (3.792)	.013			-11.267 (3.795)	-.088 **	-10.391 (3.730)	-.081 **
Mother's age at childbirth (29=0)			-.224 (.156)	-.045	-.305 (.156)	-.061			.304 (.154)	.061 *	.280 (.153)	.056
Working mother (1=working)			-2.295 (1.840)	-.038	-2.587 (1.814)	-.043			.121 (1.819)	.002	-.032 (1.784)	.000
Family size (1-8)			-.451 (.588)	-.025	-.407 (.586)	-.023			-2.699 (.581)	-.152 ***	-2.077 (.576)	-.117 ***
Parental media example												
Parental highbrow book reading					.098 (.038)	.096 *					.049 (.037)	.049
Parental highbrow television viewing					.090 (.034)	.084 **					.118 (.033)	.111 ***
Parental lowbrow book reading					.060 (.031)	.062					.027 (.031)	.028
Parental lowbrow television viewing					-.120 (.030)	-.121 ***					.154 (.030)	.156 ***
Constant	39.021 *** (3.327)		41.243 *** (4.315)		46.389 *** (5.044)		49.810 *** (3.330)		62.055 *** (4.266)		44.520 *** (4.962)	
Adj. R ²	.022		.023		.055		.004		.030		.070	
Number of cases	1,155						1,155					

Significance: *p<.05. **p<.01. ***p<.001; Source: FSDP 1998, 2000, 2003.

Third, the results in Model 3 in Table 2.3 demonstrate that for parental guidance the effects of social background are mediated to a great extent by parents' media example. For reading guidance, the effect of parental educational level runs largely via the parents' own media behaviors. Regarding television guidance the effect of parental educational level is completely indirect. Additionally, for reading guidance and instructive television guidance the effect of the parents' occupational status is substantially lower and thus partly interpreted by parental media role modeling as well.

2.5 Conclusion and discussion

This chapter examined differences in parental media socialization by social background and family composition. We used information on 2,608 Dutch adults, who reported on the media socialization activities they experienced in their parental home. Study of social differentiation in parental media socialization is relevant because of its potential contribution to understanding the intergenerational transmission of beneficial and disadvantageous media skills. In this process we expected parents' use of highbrow and lowbrow media content, also referred to as parents' media preferences, to play an important role. These media preferences may largely explain parent-child interaction on media content and account for part of the effects of parental social background.

Our results underpin the dominant role of socioeconomic background in media socialization. We found that children from the higher social strata are privileged in the quality and quantity of parental media socialization activities. For almost all of the selected parental media socialization practices, intentional and unintentional, we found parental social background to be the most significant predictor. Parents from higher social strata consume more highbrow media content and less lowbrow television programs. Our study confirmed the valued status of leisure reading, since all reading activities are more common in higher status families. Parent-child interaction on media consumption is also strongly affected by parental resources, especially when it comes to reading guidance. Prior research has revealed that higher educated parents are more involved in cognitively stimulating child-rearing activities, and this also seems to be the case in media-related communication between parent and child. It is therefore important to recognize that the parental role as educator in media affairs is socially differentiated to a large extent.

Family composition proved important too. Older mothers exhibit more highbrow and less lowbrow media consumption, thereby setting a more beneficial example in their media behaviors than younger mothers. Children from large families have to share their parents' attention, resulting in less parental guidance in media consumption. Remarkably, children with divorced parents report their parents to be less interactive on media content. Time restrictions may play a role here, in that divorced parents have less leisure time, or the contact between one of the parents and the child may be limited, which would obviously restrict actual media guidance. This may have implications for a

child's development. Not only are these children less intensively guided into acquiring beneficial reading skills, they are also less protected from possible harmful television effects. In addition, our findings indicate that in parent-child interaction on media use the social background effects run largely via the example parents' set in their own media behaviors. This means that higher educated parents guide their children's media competencies more intensively, not only because they have the resources to do so, but also because they enjoy specific media content themselves and apparently want to transmit these preferences to their children. We find the opposite process for lower educated parents. These parents' low-cognitive media consumption preferences ultimately result in less beneficial media guidance activities.

In this chapter, we explored media socialization from a broad perspective, but some challenges for future research remain. Our study has some drawbacks. First, we made use of retrospective data which is frequently argued to be influenced by memory effects and social desirability bias. However, previous research on respondents' reports of parental cultural capital using the FSDP data showed no significant biases due to random and systematic measurement error (De Graaf, De Graaf & Kraaykamp, 2000; De Graaf, Poortman & Ultee, 1996; De Vries & De Graaf, 2008). Second, possible relevant predictors of media socialization, like the time children actually spent on media use, are unavailable. Future research might include these aspects in their analyses. Third, parental media socialization might be gendered. After all, in various domains scholars have shown differential socialization effects for boys and girls, including in media use (e.g. McLeod & Brown, 1976; Livingstone, 2002). Although highly interesting, this issue is beyond the scope of the present study. The relevance of our research is mostly found in extending the cultural reproduction thesis by including family composition factors and unintentional as well as intentional parental socialization activities. Future research, however, will likely provide more insight into the effects of a possibly gendered parental media socialization.

To conclude, research on the reproduction of social inequality may benefit from dealing with media socialization aspects as potentially independent sources of inequality. With an ever-growing supply of media content, combined with a growing number of highly educated parents, research on the long-term effects of parental media socialization will be interesting and may contribute to explaining social inequality in numerous domains. Also, here we studied parents and their media socialization activities in the Dutch context, to study whether parental media socialization differs over countries and to what extent our results may be generalized to other nations seems relevant as well. We explore these notions in the following chapters.

3 Parental media socialization and educational attainment: resource or disadvantage?⁷

3.1 Introduction

This chapter focuses on 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 (Gentile & Walsh, 2002; Hancox, Milne & Poulton, 2005; Valkenburg, Cantor & Peeters, 2000). Some studies however report positive effects of certain TV behavior on children's cognitive and linguistic skills (Fisch, 2004; 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 setting rules. 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, Ijzendoorn & Pelligrini, 1995; De Graaf, De Graaf & Kraaykamp, 2000; Kloosterman, Notten, Tolsma & Kraaykamp, 2010). 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.

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, 1990 [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 preferences and behaviors 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 (e.g. Crook, 1997; De Graaf, 1986; De Graaf, De Graaf & Kraaykamp, 2000; Sullivan, 2001), studies on the effects of cultural

7 A slightly different version of this chapter is published as: Notten, N. & Kraaykamp, G. (2010). Parental media socialization and educational attainment: Resource or disadvantage? *Research in Social Stratification and Mobility*, 28 (4): 453-464. A previous Dutch version was published as: Notten, N., Kraaykamp, G. & Ultee, W. (2008). Ouderlijke mediasocialisatie: hulpbron of handicap? *Mens & Maatschappij*, 83 (4): 360-375.

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?*

The current 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" preferences 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 family media socialization activities deals mainly with children still living within the parental home (e.g. Nathanson, 2001; Valkenburg et al., 1999; Vandewater et al., 2005b). 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 of the Dutch Population, we analyze 8,316 individuals from 3,257 families (De Graaf et al. 1998, 2000, 2003).

3.2 Theory and hypotheses

3.2.1 Cultural resources and parental media socialization

A large body of research bears out the importance of parental resources for children's educational success (Aschaffenberg & Maas, 1997; Bourdieu & Passeron, 1990 [1977]; Dumais, 2005; Farkas, 1996; Lamont & Lareau, 1988). Parents impart skills and competencies to their children, but this parental socialization differs both in content and intensity 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, 1973; Bourdieu & Passeron, 1990 [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 cognitive 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 point of view suggest the need to split the concept of cultural capital into beneficial and disadvantageous parental cultural resources and habits.

In this study we focus on parental television viewing and reading behavior as cultural preferences or resources holding both positive and negative status values and cognitive aspects, 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; Kloosterman et al., 2010; Notten & Kraaykamp, 2009a). 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, 1977). 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 or intentional 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 more insight into the actual process of cultural and media socialization, our study includes both aspects of parental media example and media guidance.

3.2.2 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 (Sharif & Sargent, 2006; Valkenburg, Cantor & Peeters, 2000). It consequently has a negative image. Also, television viewing is thought to take up time that could otherwise be spent on school-related activities (Hancox, Milne & Poulton, 2005; 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 (Gentile & Walsh, 2002; Vandewater et al., 2005b; 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; 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, 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 television 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; 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 behavior 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; Gentile & Walsh, 2002; Pool, Van der Voort, Beentjes & Koosltra, 2000). Such lowbrow preferences 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; Lareau, 2003). Hence, *parental lowbrow book reading and lowbrow television viewing harms a child's educational attainment*.

3.2.3 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 (e.g. Austin, 1993, 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 (Becker, 2010; Schieffelin & Ochs, 1986). Therefore, we argue that next to the example set by parents in their media behaviors, parent-child interaction regarding media is relevant for a child's educational success. Moreover, in this study we assume a causal relation between parents' own media behaviors or preferences and the media guidance activities they undertake (see also Notten & Kraaykamp, 2009a). Accordingly, we expect parental media guidance to mediate the effect of the parents' own media habits (i.e. the parental media example) on their children's educational attainment

First we focus on parental interactions regarding television viewing. When it comes to the effects of television viewing results seem equivocal. Scholars testing displacement theory show that especially lowbrow (entertainment) television viewing absorbs time that otherwise might be spent on educational activities, like doing homework and reading (Hancox, Milne & Poulton, 2005; Koolstra, Van der Voort & Van der Kamp, 1997). Other studies, find that watching educational television programs enhances

children's school readiness (Fisch, 2004; Wright et al., 2001). In this study we must acknowledge that some parents supervise their children's television behaviors, 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; Notten & Kraaykamp, 2009a; Valkenburg et al., 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 book reading to be an activity that stimulates children's cognitive development and cultural competency (Bus, Van IJzendoorn & Pelligrini, 1995; Leseman & De Jong, 1998). Sulzby & 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., 2010; 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.

3.3 Methodology

3.3.1 Data

To test our hypotheses we employ three waves of the Family Survey of the Dutch Population (FSDP), conducted in 1998, 2000 and 2003 (De Graaf et al., 1998, 2000, 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 2,029 in 1998, 1,561 in 2000 and 2,714 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 does not indicate that error in retrospective measures of parental cultural capital may significantly affect our results (e.g. De Graaf, De Graaf & Kraaykamp, 2000; De Vries & De Graaf, 2008). 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).⁸ In the Netherlands, television was introduced around 1955 and generally accepted in the early 1960's. 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.

3.3.2 Measurements

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).

⁸ We lack the housing information on a few siblings, so our dataset may contain a marginal proportion of siblings still living with their parents.

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 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. *Parental television 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.

Next, a confirmative factor analysis established the existence of a lowbrow and a highbrow dimension in parental reading.⁹ We constructed *parental highbrow book 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 book 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. Both aspects of favored parental reading content were standardized by ranking the scores from 0 to 1. A confirmative factor analysis also established a highbrow and lowbrow dimension for the TV programs parents preferred according to the respondents' reports.¹⁰ We constructed *parental highbrow television viewing* by taking the mean of the following two items after standardization: (a) parents watched informative programs and (b) parents watched cultural-artistic programs. Answer categories were (0) 'never', (1) 'sometimes' and (2) 'often'. *Parental lowbrow television 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. Again, the variables were standardized by a ranking between 0 and 1.

⁹ 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.

¹⁰ Sports loaded a little higher on the popular dimension. Because of the popularity of sport programs (around 50% of respondents watched often) and the limited cultural content of these programs, this item is assigned to the lowbrow dimension.

Parental television guidance is probed in the FSDP 2003 only, and is represented by nine indicators representing parental television guidance at the time when the respondent was between 5 and 12 years of age. Confirmatory factor analysis revealed that these indicators represent three conventional forms of parental television guidance: restrictive guidance, instructive guidance and covieing (Nathanson, 2001; Valkenburg et al., 1999). Three items refer to *parental restrictive television guidance*: (a) 'My parents limited children's hours of TV consumption', (b) 'My parents decided what the children could watch' and (c) 'My parents had a specific TV timetable for the children' ($\alpha=0.74$). *Parental instructive television guidance* is measured by the following items: (a) 'My parents discussed with me why something seen on television was wrong', (b) 'In our family television programs were often discussed' and (c) 'My parents helped me understand what I saw on television' ($\alpha=0.77$). *Parental television covieing* is represented by (a) 'I often watched together with my parents a television show we both liked', (b) 'With my parents I could laugh about something on TV', (c) 'I often watched together with my parents television programs we were both interested in' ($\alpha=0.79$). Answers were given on a 4-point scale ranging from (0) 'entirely untrue' to (3) 'entirely true'. Scales were created taking average scores and were standardized between 0 and 1 employing a ranking procedure. *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 ($\alpha=.83$). 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.¹¹ *Working mother* is measured

¹¹ 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%)

by two questions on the working status of a respondent's mother, namely, (a) was your mother employed for at least one year during preschool and (b) was your mother employed for at least one 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). Respondents' sex and birth year are included as controls. Sex indicates whether the respondent is a (0) male or (1) female. Birth year 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; 1996). This procedure replaces missing values by random imputation, here based on the observed values 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 3.1 presents a description of the variables.

3.3.3 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.¹² Our hierarchical dataset contains 8,316 individuals nested in 3,257 families. Because the analysis of the effects of parental guidance only makes use of the 2003 FSDP data, in this case the dataset contains 3,498 individuals nested in 1,332 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. Bivariate correlations are shown in Appendix 2.

¹² We applied cross-classified analyses to correct for the clustering of respondents and partners within a household. The results did not differ.

Table 3.1 Descriptive statistics of all variables

	Minimum	Maximum	Mean	Std. Deviation
Educational level respondent	6.00	21.00	11.90	2.94
Parental media socialization				
Parental television time (0/1)	0	1	0.56	
Parental reading time (0/1)	0	1	0.33	
Parental highbrow television viewing (0-1)	0.01	0.98	0.50	0.27
Parental lowbrow television viewing (0-1)	0.00	0.99	0.50	0.29
Parental highbrow book reading (0-1)	0.00	1.00	0.50	0.28
Parental lowbrow book reading (0-1)	0.01	1.00	0.50	0.29
Parental instructive television guidance(0-1) ^a	0.03	0.99	0.50	0.29
Parental restrictive television guidance (0-1) ^a	0.02	0.97	0.50	0.29
Parental television coviewing (0-1) ^a	0.01	1.00	0.50	0.29
Parental reading guidance (0-1) ^a	0.02	1.00	0.50	0.29
Parental social background				
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 family composition				
Mother's age at childbirth (29=0)	-13.00	16.00	0.32	5.89
Parental divorce (1=divorced)	0	1	0.05	
Working mother (1=working)	0	1	0.27	
Family size (1-8)	1.00	8.00	4.06	1.83
Control variables				
Respondents' birth year (1964=0)	-9.00	14.00	-0.08	5.77
Respondents' sex (1=female)	0	1	0.50	

Source: FSDP 1998, 2000, 2003 (N level 1 = 8,316; N level 2 = 3,257)

^a FSDP 2003 only (N level 1 = 3,498; N level 2 = 1,332)

3.4 Results

Table 3.2 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.

Model 1 includes individual- and family-level controls as well as family background and family compositional aspects. The results indicate that daughters are somewhat less successful in their educational career than sons, and no significant effect of birth year 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 mediated 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 models due to high correlations (see Appendix 2). 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 in Table 3.2 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.¹³ Also, because of collinearity (see Appendix 3), we chose not to include parental instructive television guidance and covieing into our final models.¹⁴ The findings in 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 $b=1.01$, respectively). Children, whose reading behavior is encouraged by their parents, spend about 12 months longer within school than children whose 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 example. 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 appears to be non-significant. This indicates that, when we control for all other socialization activities in our analysis, parental television restrictions are not noticeably associated with educational success on the long term.¹⁵ Overall, the negative impact of both parental viewing time ($b=-.63$) and lowbrow television viewing ($b=-.58$) remains highly influential.

¹³ A comparison of the results of Model 2 and 3 on the dataset of 2003 only, showed virtually identical effects.

¹⁴ Especially the correlation between parental instructive television guidance and reading guidance appears to be problematic here; both socialization activities are strongly related to a cognitive stimulating and media literate home climate (see e.g. Gentile and Walsh, 2002).

¹⁵ In line with our hypothesis, a positive and significant bivariate relation exists between restrictive parental television guidance and educational success ($r=0.08$, see Appendix 2). The negative effect of parental television guidance in our models might indicate reverse causality; parents may increase their television restrictions and instructions when their children's school results decline.

Table 3.2 Multilevel regression models on educational attainment of parental media socialization, unstandardized coefficients

	Model 0		Model 1		Model 2		Model 3		Model 4 ^a		Model 5 ^a			
	b	s.e	b	s.e	b	s.e	b	s.e	b	s.e	b	s.e		
Individual level (level 1)														
Respondents' sex (1=female)			-0.19 ***	0.05	-0.18 **	0.05			-0.19 ***	0.05	-0.23 **	0.08	-0.22 **	0.08
Respondents' birth year (1964=0)			0.00	0.01	0.00	0.01			0.00	0.01	0.01	0.01	0.00	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
Parental divorce (1=divorced)			-0.85 ***	0.15	-0.81 ***	0.15			-0.82 ***	0.15	-0.66 **	0.23	-0.73 **	0.23
Family level (level 2)														
Working mother (1=working)			-0.04	0.08	-0.01	0.08			-0.05	0.08	0.02	0.12	0.00	0.12
Family size (1-8)			-0.18 ***	0.02	-0.19 ***	0.02			-0.19 ***	0.02	-0.24 ***	0.04	-0.24 ***	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 television time (0/1)					-0.71 ***	0.07					-0.63 ***	0.11		
Parental reading time (0/1)					0.36 ***	0.08					0.15	0.13		
Parental highbrow television viewing (0-1)									0.21	0.14			0.18	0.22
Parental lowbrow television viewing (0-1)									-0.52 ***	0.13			-0.58 **	0.2
Parental highbrow book reading (0-1)									0.78 ***	0.16			0.37	0.26
Parental lowbrow book reading (0-1)									0.22	0.14			0.17	0.21
Parental media guidance														
Parental restrictive television guidance (0-1)											-0.09	0.19	-0.07	0.19
Parental reading guidance (0-1)											1.03 ***	0.23	1.01 ***	0.24
Intercept	11.99 ***	0.04	12.72 ***	0.10	13.02 ***	0.11			12.40 ***	0.16	12.72 ***	0.23	12.38 ***	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	1.72 ***	0.15
ICC	0.45													
Deviance (-2LL)	39982.541		38856.149		38740.923				38795.818		16030.119		16131.035	

Significance: *p<.05, **p<.01, ***p<.001 Source: FSDP 1998, 2000, 2003 (N level 1 = 8,316; N level 2 = 3,257)

^a FSDP 2003 only (N level 1 = 3,498; N level 2 = 1,332).

3.5 Conclusion and discussion

This chapter 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 determining 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 multilevel 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 this study has some drawbacks. First, we made use of retrospective data, which is frequently argued to be affected by memory effects and social desirability. Previous analyses on respondents' reports of parental cultural capital using the FSDP-data however revealed no serious bias (e.g. De Graaf, De Graaf & Kraaykamp, 2000). 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 and further analyze 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 type and media content, parental media socialization may function as a beneficial resource or as a disadvantage in a person's educational career.

4 Home media and educational success from an international perspective¹⁶

4.1 Introduction

In the previous chapter on educational attainment we studied parents and their media socialization activities in the Dutch context. This chapter studies whether effects of parental media socialization for a child's educational success differ over countries, depending on a nation's state of development. Here we explicitly study the role of parental media resources, as part of parents' media socialization strategies.

A large body of research indicates that children's educational performance partly depends upon parental resources and socialization activities (Coleman, 1988; Farkas, 1996; Lareau, 1987). Parental cultural socialization may particularly enhance children's educational success, since parents nurture and equip their children with cultural skills and competencies that could give their offspring a lead start in school (Bourdieu, 1997; Bourdieu & Passeron, 1990 [1977]; De Graaf, 1986; DiMaggio, 1982; Dumais, 2005). Scholars from various disciplines have established the important role of parental media socialization activities, such as reading and television viewing in the home, in cultural socialization and reproduction (De Graaf, 1986; Elchardus & Siongers, 2003; Schieffelin & Ochs, 1986; Sullivan, 2001). Parents can actually enhance their children's school success by fostering certain media activities, for instance, by creating a positive reading climate in the home (Bus, Van Ijzendoorn & Pelligrini, 1995; De Graaf, De Graaf & Kraaykamp, 2000). However, other media consumption patterns, like excessive television exposure, are disadvantageous for a child's cognitive and educational development (Notten & Kraaykamp, 2011; Schmidt, Pempek, Kirkorian, Lund & Anderson, 2008). The current study elaborates on previous research on the reproduction of educational inequality by studying the effect on children's science performance of parental media resources. More specifically, it studies the impact of the availability of books, television sets and personal computers in the family household. Our first research question reads: *To what extent do parental media resources explain differences in children's science performance?*

Comparative research shows that countries differ with respect to educational inequality, and children's school performance varies according to the national level of economic and cultural development (Chiu & Chang, 2006; Heyneman & Loxley, 1983; Levels, Dronkers & Kraaykamp, 2008). In explaining these cross-national differences, parental media resources may play a relevant role. Therefore, our second research question reads: *To what extent does a country's level of development affect the relation between parental media resources and children's science performance?*

¹⁶ A slightly different version of this chapter is published as: Notten, N. & Kraaykamp, G. (2009). Home media and science performance: A cross-national study. *Educational Research and Evaluation*, 15 (4), 367-384.

This particular chapter contributes to cultural and media socialization research in several manners. First, we hypothesize that certain parental media resources enhance a child's science performance, whereas other media resources in the parental home are disadvantageous for a child's school career. The second major contribution is the inclusion of 53 countries. Previous research on media access in the parental home largely targeted a single country or one specific media resource (Attewel & Battle, 1999; Evans, Kelley, Dikora & Treiman, 2010; Kraaykamp 2003; Park, 2008; Roe, 2000). The current international study of the effects of media resources in the family home on children's science performance thus provides broader insight into the media socialization process. Third, we apply multilevel modeling to test our expectations, which enables us to distinguish between country-level and individual-level effects. By estimating cross-level interactions in multilevel models we study whether the relation between parental media resources and children's science performance is affected by a country's stage of economic and cultural development (i.e. modernization). We employ data from the OECD Programme for International Student Assessment (PISA) conducted in 2006 (OECD, 2006). The PISA 2006 database contains information on 15-year-old students' science performance (knowledge and skills), but also on family background and media access in the parental home.

4.2 Theory and hypotheses

4.2.1 Cultural reproduction and media socialization

Scholars generally agree that children from higher status families perform better at school and experience a more successful educational career than children with a less privileged background (e.g. De Graaf, 1986). According to Bourdieu and Passeron (1990), it is the intergenerational transmission of cultural resources that mediates the influence of parental socioeconomic background on children's educational performance. Hence cultural reproduction theory explains differences in educational success between social groups by differences in parental cultural capital, traditionally measured by direct indicators of parental cultural behaviors. According to cultural reproduction theory, parents socialize or nurture their children within a specific cultural habitus, and this set of attitudes and skills acquired during childhood is assumed to persist into adult life and to affect educational performance.

From Bourdieu's theory it follows that in particular highbrow cultural behaviors are transmitted over generations, and this process takes place mainly through education and the educational system. First, the school curriculum reflects the dominant (highbrow) culture in society and, perhaps even more important, presupposes equality in possession of cultural assets at the beginning of a person's educational career. Consequently, children from culturally competent backgrounds are more familiar with school culture and thus are better equipped to follow the school curriculum. In this way

selection takes place by the school system itself: children from less culturally proficient families are less likely to enter higher levels of education. Also, children whose parents have less cultural capital might feel that they do not really fit in with school culture, especially at the higher levels of education. This lack of familiarity with the school culture and curriculum may result in self-selection, for instance, with these children dropping out or entering lower levels of education. In this case one might speak of a cultural conflict or clash between a child's family-specific traditions and the school culture (Bourdieu & Passeron, 1990 [1977]; Dumais, 2005; Kalmijn & Kraaykamp, 1996). Attention in cultural reproduction research has recently shifted from cultural capital as a means of intergenerational transmission of social status to cultural capital as an indication of cognitive competency (Barone, 2006; De Graaf, De Graaf & Kraaykamp, 2000; Farkas, 1996). The current study recognizes both status and cognitive aspects of parental cultural socialization activities. When it comes to leisure time and parents' cultural behaviors, the most frequent cultural in-home activity is media consumption. Consequently, media access and assets in the parental home constitute a relevant part of parents' cultural socialization, and also differ in the social status they are associated with as well as in the cognitive stimulation they offer. In line with cultural reproduction theory, we expect parental media resources to directly affect children's educational performance and thereby to mediate the influence of the parental socio-economic background.

According to socialization and learning theories, children imitate their parents' media behavior, especially when it is performed frequently (Bandura & Walters, 1963, 1977; Kraaykamp, 2003; McLeod & Brown, 1976). We argue that the media resources available in the parental home indicate the parents' own media preferences (Chiu & Chang, 2006; D'Haenens, 2001; Evans, Kelley, Dikora & Treiman, 2010). Consequently, they represent the media habits and values that parents stress unintentionally or intentionally in their children's upbringing (e.g. Van der Voort, Nikken & Van Lil, 1992). Investing in media resources in the home is a meaningful part of parents' media socialization practices. This study analyses parental media socialization by focusing on the number of books, television sets and personal computers available in the family home.

4.2.2 Books

In pedagogical research and sociology, many studies discuss the effects of parental reading on children's cognitive and cultural competency (Bus, Van IJzendoorn & Pellegrini, 1995; Leseman & De Jong 1998). Results have shown a positive reading climate in the parental home to be especially valuable for acquiring reading, language and problem-solving skills (Cook-Grumperz, 1973; Kraaykamp, 2003; Schieffelin and Ochs, 1986). Particularly in the higher levels of education, reading competencies are relevant – perhaps even imperative – for success. Parents stimulate their children's interest and skills in reading by setting an example and creating a literary home climate;

for instance, by reading themselves and investing in reading materials in the home (Evans et al., 2010; Van Peer, 1991). Next to a cognitive stimulus, book reading reflects a habitus that is socially rewarded and highly appreciated at school. Parents from higher social status groups are particularly likely to foster their children's school career by providing a positive literary environment at home (Barone, 2006). Overall, research repeatedly reveals that parents who invest in literature and spend a substantial amount of their leisure time reading books are found to stimulate their children to read (e.g. Kraaykamp, 2003). Additionally, the intergenerational transmission of this beneficial habit enhances children's school performance (De Graaf, De Graaf & Kraaykamp 2000; Notten & Kraaykamp, 2010; Sullivan, 2001). Since parental reading socialization is a socially rewarded and cognitively stimulating activity we expect that *a literature-rich parental home enhances a child's science performance.*

4.2.3 Television sets

Unlike reading, television viewing is largely associated with entertainment, passivity, low cognitive stimulation, reduced concentration and non-creativity (e.g. Hancox, Milne & Poulton, 2005; Schmidt et al., 2008). Consequently the medium itself is accorded a low status. Although equivocal, scholars have found significant correlation between a family's social status and the number of television sets in the home. In western countries it appears that the higher a family's social status, the fewer additional television sets are found in the home. Also, in higher status households a television set in a child's bedroom is less common, and children spend fewer hours in front of the television screen than in lower status households (Beentjes, Koolstra, Marseille & Van der Voort, 2001; Livingstone, 2002; Roe, 2000).

Research indicates that time spent watching television displaces and disturbs educational activities like reading and doing homework. (Sharif & Sargent, 2006; Verboord & Van Rees, 2003; Pool, Van der Voort, Beentjes & Koolstra, 2000). A television set in the bedroom seems to especially increase children's television consumption and consequently harms their educational performance (Borzekowski & Robinson, 2005; Bovill & Livingstone, 2001; Vandewater et al., 2005b). From this point of view, easy television access in the parental home likely has a lasting negative effect on a child's school success. However, some scholars have found that watching educational programs such as 'Sesame Street' may enhance a child's language skills and schooling (Wright et al., 2001; Fisch, 2004).

Nonetheless, this study assumes a negative effect of the availability of television sets in the parental home on children's school performance, for several reasons. A greater number of television sets is an indication of (a) higher odds of a parental example of excessive viewing, (b) more opportunity for television consumption for all family members, (c) a higher probability that children have a television set in their own bedroom and (d) less parental supervision of children's television consumption both

in time and content. Easy access to television consumption in the parental home would probably hinder or replace school-related activities, and therefore does not match school culture and curriculum. We thus expect that *a television-rich parental home harms a child's science performance.*

4.2.4 Computers

When it comes to the spread of digital applications, the availability of personal computers and Internet access is more common in households with children than in those without (D'Haenens, 2001; Drotner, 2000; Livingstone, 2002). Though parents are ambivalent about the effects of computer use for their children's well-being, the leading argument for parents to invest in home computers is its use in an educational setting (Livingstone, 2007; Subrahmanyam, Kraut, Greenfield & Gross, 2000). Indeed, having and using a home computer is associated with better reading and academic achievement (Attewel & Battle, 1999; Borzekowski & Robinson, 2005).

Computer use also seems to be a socially valued activity matching school culture relatively well, at least better than having no computer or digital experience at all. A large body of research reveals a positive correlation between parental socioeconomic background and the availability of a computer in the family home and in a child's bedroom (D'Haenens, 2001; Livingstone, 2007). Higher status and higher educated parents are more experienced with digital media themselves, they have a more positive attitude towards computer and Internet use, and they understand better that children need digital and ICT competencies in school (Clark, Demont-Heinrich & Webber, 2005; Notten, Peter, Kraaykamp & Valkenburg, 2009; Pasquier, 2001). As a consequence, high-status parents will likely more invest in easy computer access in the family home. More recently, in countries where digital applications are widespread, recreational computer use, such as (excessive) time spent on social media and playing violent (on-line) computer games, has also been associated with negative effects on a child's development (Livingstone, Haddon, Görzig & Ólafsson, 2011; Nikken, 2007; Valkenburg & Peter, 2011). However, scientific research on these issues, especially in relation to a child's school success, is still rather scarce and equivocal. In general, access to personal computers in the family home seems socially rewarded, matches school culture and curricula and provides a means to enhance a child's educational performance. Therefore we expect that *a computer-rich parental home enhances a child's science performance.*

4.2.5 Cross-national differences in media effects

Previous research established that in wealthier countries children perform better at school than their counterparts in less developed nations (Baker, Goesling & Letendre, 2002; Chiu & Chang, 2006). Also, in wealthier and more culturally developed countries the diffusion of literacy and the spread of relatively new media, like television and computer, is more

common than in less modern countries (D'Haenens, 2001; Notten, Peter, Kraaykamp & Valkenburg, 2009). This gives reason to expect that the effect of home media on children's science performance may vary according to a country's level of modernization. However, up until now scant research has been done in this domain. Consequently, our hypotheses in this regard are explorative and represent two contrasting viewpoints, that is, the effect of media availability in the parental home on children's science performance may be reduced or enlarged by a country's level of development.

First, we argue that in the more developed countries home media is universal and therefore not as much of a distinctive cultural asset as in less developed nations. In less modernized countries, media goods are not easily accessible to all social strata. There is a clear distinction between a small segment of 'haves' and the majority 'have-nots' (i.e. the 'information-rich' and 'information-poor'). However, when looking at countries with higher levels of development, social mobility is larger, the general level of knowledge is higher and due to the diffusion of innovations the cost of the initially elite cultural products is rather low (Beck, 1992; Rogers, 1995). According to this notion, media access becomes more widespread and less distinctive in modern countries. The negative effect of television and the positive effect of literature and computers is then likely lower. We therefore expect that *a media-rich parental home is less relevant for children's science performance in countries with a higher level of economic and cultural development.*

Second, in all countries social class and parental cultural and media socialization activities are relevant predictors of a child's educational success (Barone, 2006; Levels, Dronkers & Kraaykamp, 2008). This is in line with cultural reproduction theory (Bourdieu, 1973; Bourdieu & Passeron, 1990 [1977]), which holds that in contemporary societies the intergenerational transmission of family wealth is no longer sufficient for the higher social groups to maintain their elite status. Cultural reproduction theory states that these high-status parents apply compensating strategies. Indeed, research shows that in modern countries, where society is more egalitarian and meritocratic schooling systems are universal, the impact of family (cultural) resources on a child's educational success is equally high or even higher than in less developed nations (Heyneman and Loxley, 1983; Park, 2008).

In modern or highly developed countries, also labelled 'information-rich' and 'knowledge-based' societies, cultural and media competencies are highly relevant for success in life (Norris, 2001; Notten & Kraaykamp, 2010; Pasquier, 2001; Van Eijck & Bargeman, 2003). We therefore might expect home media, as a form of cultural resources, to become more crucial in the reproduction of social inequality. Consequently, in more developed countries the availability of media resources in the parental home plays a more distinctive role in a child's educational career than in less developed countries. We thus expect that *a media-rich parental home is more relevant for children's science performance in countries with a higher level of economic and cultural development.* Note that this means we expect increases in both the positive effect of literature and computers and the negative impact of a television-rich parental home.

4.3 Methodology

4.3.1 Data

The data we employ originate from the Organisation for Economic Co-operation and Development's (OECD) Programme for International Student Assessment (PISA), conducted in 2006 (OECD, 2006). The target population of the survey was 15-year-old students enrolled in secondary education. Participating students completed a two-hour test with open and multiple-choice tasks and a half-hour questionnaire about themselves. The selection of students was based on two-stage random sampling: first schools were extracted, then respondents were selected. Nationally representative samples of 15-year old students were drawn. A drawback of our data is that enrolment rates in secondary school as well as drop-out rates are not equally distributed over all countries included in our study. Therefore, the students in our dataset might not be an accurate representation of the general population of 15-year-olds in a specific country when it comes to background characteristics and abilities. Our dataset omits four of the 57 countries included in the PISA 2006 study because of incomplete or incomparable data on relevant country characteristics.¹⁷ We further removed all students with missing values on one of the relevant variables in our models. These selections resulted in a hierarchical dataset containing 345,967 students at the individual (lower) level and 53 countries at the national (higher) level.

4.3.2 Measurements

The dependent variable *science performance* is measured by scores on 108 science-related tasks. PISA 2006 defines scientific literacy as "[s]cientific knowledge and use of that knowledge to identify questions, to acquire new knowledge, to explain scientific phenomena, and to draw evidence-based conclusions about science-related issues" (OECD, 2007). PISA 2006 used 108 items of varying levels of difficulty to assess respondents' knowledge of and about science and three broad areas of science competency (identifying scientific issues, explaining phenomena scientifically, using scientific evidence).¹⁸ Respondents were presented a selection of these items, and item response modeling was used to construct plausible values. Each student was awarded a score indicating both the performance of the student and the difficulty of the question. Five values were reported measuring different aspects of respondents' science competency and knowledge. PISA 2006 also created five plausible values combining the questions from all scales, indicating students' overall performance in science. We used the mean score of these last five values to measure students' science performance.¹⁹ The

17 Qatar, Luxemburg and Liechtenstein are excluded because of their extraordinary (banking) economy (GDP) and subsequently poor model fit. Taiwan is excluded because of incomplete data on country characteristics.

18 Example assessment items are available at <http://www.pisa.oecd.org/dataoecd/47/23/41943106.pdf>

19 We also analyzed the five values separately, obtaining virtually identical results.

OECD constructed the science performance scales such that the average student score in OECD countries was 500 points, with a standard deviation of 100 points (OECD, 2007). Because our dataset also contains non-OECD countries, our dependent variable ‘science performance’ ranges from 23.7 to 912.8 points with a mean score of 482.9 points.

The sex of the respondents is coded (0) male and (1) female. Although we refer to our respondents as 15-year-olds, respondent age ranges between 15 and 16 years.²⁰ Parental socio-economic background is measured by parental educational level (in years) and occupational status. Parental educational level is classified using the International Standard Classification of Education (ISCED), ranging from (0) none to (6) ISCED 5A and 6, theoretically oriented tertiary and post-graduate education. The score of the parent with the highest education is recoded into estimated years of schooling (OECD, 2009), ranging from 3 to 18 years. OECD (2009) uses the highest score on the International Socio-Economic Index of Occupational Status (ISEI) (Ganzeboom, Treiman & De Graaf, 1992) of both parents to measure parental occupational status, here ranging from 16 to 90. For use in the multilevel models, we centered parental educational level (in years) and occupational status to the mean.

Parental media resources are measured by three specific types of media in the family home: books, television sets and computers. For each media resource we constructed a dichotomous variable, indicating whether the specific media asset is present.

Additionally, we created linear variables for all media resources, representing the accumulation of media assets in the family household. The simultaneous inclusion of the dichotomous and linear media variables in our models enables us to analyze the effect of mere media availability as well as the effect of an increasing number of media resources in the parental home. Moreover, in this manner we solve existing problems of nonlinearity, since the initial variables measuring the number of computers and televisions in the parental home show a off-shift in their (linear) relation with science performance for those who own television sets and computers (respectively, one television and one computer) and those who do not.

The variable *number of books in the parental home* measures the reading climate at home. Students were asked to indicate the number of books in their home. Answer categories were (0) 0-10 books, (1) 11-25 books, (2) 26-100 books, (3) 101-200 books, (4) 201-500 books and (5) more than 500 books. The dichotomous variable *home library* indicates whether there were (0) hardly any books (ten books or less) or (1) more than ten books in the parental home. The *number of television sets in the parental home* is measured by the following question: ‘How many television sets are there in your home?’ Students could answer with (0) none, (1) one, (2) two or (3) three or more. We also constructed a dichotomous variable *home television access*, indicating whether there was (0) no television set or (1) at least one television set in the parental home. Students were also

²⁰ PISA selected students aged between 15 years and 3 months and 16 years 2 months at the start of the assessment, regardless of grade, school program, or type of institution (OECD, 2007).

Table 4.1 Descriptive statistics of all variables

	Minimum	Maximum	Mean	Std. Deviation
Individual level (level 1)				
Science performance respondent	23.67	912.84	482.94	99.04
Parental media resources				
Home library (0/1)	0	1	0.85	
Number of books in parental home	0.00	5.00	2.14	1.44
Home television access (0/1)	0	1	0.99	
Number of TVs in parental home	0.00	3.00	2.18	0.81
Home computer access (0/1)	0	1	0.78	
Number of PCs in parental home	0.00	3.00	1.20	0.91
Parental social background				
Parental educational level (yrs)	3.00	18.00	12.75	3.40
Parental occupational status	16.00	90.00	47.73	17.03
Control variables				
Respondents' sex (1=female)	0	1	0.51	
Respondents' age	15.17	16.33	15.78	0.29
Country level (level 2)				
GDP per capita (\$)	1813.00	51862.00	23614.52	12085.71
Enrolment tertiary education (%)	15.00	95.00	55.47	19.22

Source: PISA 2006 (N level 1 = 345,967; N level 2 = 53).

asked the number of computers at home. The variable *number of computers in the parental home* measures whether there were (0) none, (1) one, (2) two or (3) three or more computers available at home. The variable *home computer access*, indicates whether there was (0) no computer or (1) at least one computer present in the parental home.

Two variables at the country level represent the country’s level of development. A country’s stage of economic development or wealth is measured by GDP per capita at purchasing power parity (PPP) in 2006, in international dollars (World Bank, 2009). A country’s cultural development is measured by the percentage of gross enrolment in tertiary education (ISCED 5 and 6) in 2006, representing the general level of participation in tertiary education in a given country (UNESCO, 2009).²¹ All country-level variables are centered to the mean. Appendix 4 presents more detailed information on country characteristics. Table 4.1 presents descriptive statistics of all the variables.

²¹ Because of incomplete data on school enrollment in 2006, we use data for Germany from 1997, for Canada from 2004, for Brazil from 2005, and for Serbia from 2001 (World Bank, 2009).

4.3.3 Modeling strategy

To study cross-national differences in the effect of parental media resources we used multilevel modeling. With this method we simultaneously estimate differences between countries and between individual respondents (Snijders and Bosker, 1999). Multilevel modeling enables us to model heterogeneity and obtain more correct estimations of country effects. In Model 1 and 2 we apply multivariate multilevel modeling with a random intercept and fixed slopes. These models assume students' mean science performance to vary across countries, whereas the individual effects (covariates) are fixed among countries. Model 3 adds the country-level variables. Model 4 estimates interactions between the individual-level media-related variables and country-level characteristics. Estimating these cross-level interactions means that we assume the effects of parental media resources to vary over countries (i.e. random effects).

4.4 Results

4.4.1 Individual-level effects

Table 4.2 shows the results of the multilevel models. Our analyses began with the estimation of a baseline model with a random intercept and without predictors to assess the variance component at the country level. The significant random country-level intercept in the baseline model indicates that children's science performance varies significantly among countries. Calculating the intra-class correlation (ICC), it appears that 26 per cent of the variance in science performance of children (15-year-old students) is due to differentiation between countries.²²

Next, in Model 1 we include the control variables respondents' sex and age, as well as the parental socio-economic background characteristics. The results show that girls perform less successfully in science than boys ($b=-2.34$). Age has a significant positive impact on science performance ($b=15.43$), with older students performing better. This may reflect a difference between the students' grade levels. In line with previous research on reproduction of educational inequality, the model shows children whose parents have a higher educational level ($b=3.54$) and occupational status ($b=1.32$) perform better in science-related domains. Surprisingly, the magnitude of the effect of parental occupational status (1.32×17.03) is larger than that of parental educational level (3.54×3.40). This might be due to the more dominant effect of parental occupational status for children's educational performance in less modern countries. In Model 2 we add parental media resources. Results show that a more positive parental

²² We accounted for the nesting of students within schools by adding an extra level (school level) to control for the differentiation between schools. However, this did not affect our results.

attitude towards literature and reading, represented by an increasing number of books in the family home, is associated with better performance of their children in science ($b=16.63$). Our results also show that television access in the parental home is more beneficial for a child's science performance than having no television at all ($b=19.90$). This seems to indicate that television functions as a gateway to information and (general) knowledge of science. However, once access is accomplished with the presence of one television set, children's science performance decreases with every additional television set present in their home ($b=-7.84$). Hence, the availability of three or more television sets in the parental home has a clear negative effect on children's science performance ($19.90 + (3 \times -7.84)$).²³ The number of computers in the parental home is positively related to school performance. Children growing up in a household with computer access have a lead start in school compared to their peers growing up in homes without computer access ($b=18.73$). Furthermore, every extra computer in the parental home increases a child's science score ($b=7.59$). It appears that investments in digital applications at home are indeed a contemporary means for parents to enhance their children's science performance. However, we must be careful in our conclusions because of the possibility of reverse causality. It is likely that parents invest in home computers because (or when) their children enter the higher levels of education.²⁴ Investing in a significant number of reading materials in the home eventually seems to have the largest impact on children's educational performance ($b=0.66 + (5 \times 16.63)$). By showing a strong preference for literature parents are most successful in fostering their children's science performance. Furthermore, including parental media resources in our model explains about half of the effect of parental socio-economic background. The effect of parental educational level decreases from 3.54 in Model 1 to 1.54 in Model 2, the effect of parental occupational status declines from 1.32 to 0.88. This might be interpreted as a partial corroboration of Bourdieu's cultural reproduction theory. Parental media resources have a direct effect on a child's science performance and significantly mediate the effect of parental socio-economic background. Note that including the individual characteristics reduced both the individual and country-level variance.

²³ The effect of a specific number of media assets can be calculated by summing the effects for each additional category and the matching dichotomous variable. For example; compared to having no computer in the parental home, the effect of one computer is $b=26.32$ ($18.73+7.59$), for two computers $b=33.91$ ($18.73 + (2 \times 7.59)$), for three or more computers $b=41.50$ ($18.73 + (3 \times 7.59)$). The effect of the number of television sets in the parental home decreases from $b=12.06$ (one TV) to $b=-3.62$ (three or more TV's). Compared to having no books at home, the effect of reading materials runs from $b=17.29$ (11-25 books) to a maximum of $b=83.81$ (more than 500 books).

²⁴ Reverse causality is less obvious for investments in television sets and books.

Table 4.2 Multilevel regression models estimating the effect of parental media resources on children's science performance, unstandardized coefficients.

	Baseline Model		Model 1		Model 2		Model 3		Model 4	
	b	s.e	b	s.e	b	s.e	b	s.e	b	s.e
Individual level (level 1)										
Respondents' sex (1=female)			-2.34 ***	0.28	-4.04 ***	0.26	-4.04 ***	0.26	-4.40 ***	0.26
Respondents' age			15.43 ***	0.48	14.47 ***	0.46	14.47 ***	0.46	14.39 ***	0.46
Parental social background										
Parental educational level (13=0)			3.54 ***	0.05	1.54 ***	0.05	1.54 ***	0.05	1.56 ***	0.05
Parental occupational status (48=0)			1.32 ***	0.01	0.88 ***	0.01	0.88 ***	0.01	0.85 ***	0.01
Parental media resources										
Home library (0/1)					0.66	0.48	0.66	0.48	10.53 ***	1.11
Number of books in parental home (0-5)					16.63 ***	0.13	16.63 ***	0.13	15.00 ***	0.61
Home television access (0/1)					19.90 ***	1.23	19.91 ***	1.23	14.46 ***	3.03
Number of TVs in parental home (0-3)					-7.84 ***	0.20	-7.85 ***	0.20	-6.89 ***	0.68
Home computer access (0/1)					18.73 ***	0.50	18.73 ***	0.50	21.36 ***	1.39
Number of PCs in parental home (0-3)					7.59 ***	0.23	7.58 ***	0.23	6.08 ***	0.73
Country level (level 2)										
GDP per capita/1000 (\$) (23780=0)							1.76 ***	0.35	2.08 ***	0.34
Enrolment tertiary education (%) (55=0)							0.33	0.23	0.18	0.22
Cross-level interactions										
Home library*GDP									0.32 ***	0.08
Number of books in parental home*GDP									0.11 *	0.05
Number of TVs in parental home*GDP									-0.36 ***	0.05
Number of books in parental home*Tertiary education									0.12 ***	0.03
Intercept	480.86 ***	7.00	237.99 ***	10.03	191.52 ***	9.00	192.90 ***	8.27	190.89 ***	8.68
Variance										
Individual (level 1)	7392.97 ***	17.78	6534.44 ***	15.71	5961.82 ***	14.34	5961.82 ***	14.34	5845.37 ***	14.06
Country (level 2)	2593.82 ***	504.16	2247.19 ***	436.80	1404.08 ***	273.08	716.64 ***	139.48	1036.89 ***	254.30
ICC	0.26									
Deviance (-2LL)	4064185.91		4021477.75		3989728.67		3989693.07		3983467.24	

Significance: *p<.05, **p<.01, ***p<.001 Source: PISA 2006 (N level 1 = 345,967; N level 2 = 53).

4.4.2 Country-level effects

In Model 3 we add two country-level variables. We learn that a country's level of economic development (in terms of its GDP) is influential when it comes to children's science performance ($b=1.76$). Our results corroborate previous findings that children in more economically developed countries perform better in science than their peers in less developed nations. Tertiary education participation in a country (the percentage enrolled in tertiary education) seems to have no significant impact on science performance, after controlling for a country's level of wealth. However, this seems to be at least partially a result of the correlation ($r=0.60$) between GDP and level of educational expansion: we do find a direct and significant effect of tertiary education participation in a country on children's science performance when we exclude GDP from our models. In line with previous research we find that various aspects of a nation's development are highly correlated (Weakliem, 2002). Including country characteristics reduces the country-level variance by almost 50 per cent.

4.4.3 Variation in media effects across countries

To answer our research question on whether the influence of parental media resources on children's science performance varies across countries, we include in Model 4 all possible cross-level interactions of parental media resources with a country's GDP and tertiary education participation. Through a stepwise procedure we excluded non-significant cross-level interactions; therefore Table 4.2 presents only the significant cross-level effects.²⁵ Estimating interactions with GDP and educational participation in two separate models reveals virtually identical results (in both magnitude and direction). Apparently, our indicators of a country's economic and cultural stage of development measure one global concept: a country's level of modernization. Therefore, in interpreting our results distinguishing between the effects of a country's wealth and level of educational expansion may not be useful.

Model 4 shows that a literature-rich parental home becomes even more important in countries with a higher level of development. In modern countries the availability of books in the parental home is even more beneficial to a child's science performance than in less modern countries. Hence, we might conclude that investing in a positive reading climate at home is a modern tool for reproduction of educational inequality. Next, our findings reveal that a television-rich parental home has an even more disadvantageous effect on children's science performance in more highly developed countries. The cultural cleavage between television consumption and school culture seems to widen as countries enter higher levels of modernization. Nonetheless, we find that the positive effect of a computer-rich parental home on science performance

remains the same along the lines of modernization. Apparently, parental investment in home computers is a key aid to help children perform successfully at school, regardless of the country's level of development.

4.5 Conclusion and discussion

This chapter scrutinized the effect of parental media resources on children's science performance from an international perspective. Previous research has tested Bourdieu's cultural reproduction theory and the significance of parental cultural socialization in several countries (De Graaf, De Graaf & Kraaykamp, 2000; Georg, 2004; Sullivan, 2001). However, with a small number of exceptions (Barone, 2006; Park, 2008), few empirical attempts have been made to conduct cross-country comparisons of the significance of cultural reproduction in a person's educational career. We fill this lacunae in cultural reproduction research by studying cross-national variation in the impact of media resources in the parental home on children's science performance. To answer our research questions we applied multilevel analyses on the PISA 2006 dataset, containing information on 345,967 15-year-old students in 53 countries.

We found that a positive reading climate at home benefits children's science performance. Also, parental investment in home computers seems to pay off in terms of more successful school performance of children. We thus conclude that in all countries parents can help their children to fit in and perform well at school by creating a literature-rich and computer-rich home environment. On the other hand, although one television set in the parental home contributes to children's school success, every additional television set harms a child's science performance. Worldwide, the absence of a television set at home seems to narrow a child's worldview and knowledge of science. However, once this barrier has been overcome, the low social status and meager cognitive stimulation of (excessive) television viewing actually seems to conflict with school culture. A drawback of this study, however, is the possibility of reverse causality. For instance, parents might invest in (additional) computers in the family home when their children enter the higher levels of education. Our results also indicate that from an international viewpoint half of the effect of parental social status is mediated by parental media resources. These findings corroborate to some extent Bourdieu's cultural reproduction theory from a global perspective.

We expected the effect of parental media resources on children's science performance to vary across countries. Our results indicate that a literary parental home becomes more important (i.e. advantageous) for a child's science performance in countries with a higher level of modernization. Hence, it seems that even in modern digital-based societies books, often referred to as 'old' media, are (still) highly important in enhancing children's science performance. However, a television-rich parental home is even more harmful for a child's school results in more modern countries. The beneficial effect of home computer access on children's school performance remains stable,

²⁵ Simultaneously including all cross-level interactions produces practically identical results.

regardless of a country's level of development. Overall, and with caution, we conclude that both parental reading and television socialization are becoming more important factors in the process of cultural reproduction and social exclusion in modern societies. This finding of an increasing significance of cultural competencies supports the notion of an 'elitist rearguard' in contemporary information-based societies (Knulst, 1992; Van Eijck & Bargeman, 2004).

This chapter questioned the significance of home media access for a child's science performance from an international perspective. Globally, we found media provision in the parental home to be a significant component of the parental resources and media socialization activities relevant for a child's school success. Moreover, the results give reason to believe that parental media resources become even more important in the reproduction of educational inequality in more modern countries. This study suggests that the availability of media in the parental home reflects parental media preferences and media socialization activities. Future research, however, might take into account other measures of parental media socialization, such as parental media role modeling behaviors and guidance activities to further test these hypotheses. Also, because families are not equally equipped with home media assets, policymakers and researchers addressing educational inequality might be advised to pay more attention to programs providing access to beneficial media such as books and computers, for instance, at schools, community centers, day care centers and libraries. Moreover, governments might become more aware of the individual level implications of national-level policies, as national investments, e.g. in digital infrastructure, may not equally benefit all children's school and cultural competencies.

5 Family media matters: the intergenerational transmission of media taste²⁶

5.1 Introduction

In contemporary societies media use plays a relevant, perhaps even dominant, role in everyday life. Media, in many types and forms, is a source of both information and recreation, and media use has become a foremost leisure pastime. But not everyone uses the same media sources and content; people differ greatly in their media taste. Some prefer to spend time reading literary novels, whereas others enjoy watching soap operas on television. Furthermore, these differences are found to be highly associated with a person's family and social background (see, e.g., Bennett, 2006; Roe, 2000). Media consumption is thus a class-specific cultural practice and may be seen as a significant factor in expressing social status and confirming social boundaries. A relevant question therefore is how differentiation in media taste evolves.

Lifestyle research has repeatedly found a person's individual characteristics to play a key role when it comes to differentiation in media taste (Konig, Rebers & Westerik, 2009; Van Rees & Van Eijck, 2003). For example, higher educated people tend to watch cultural and informative television programs because these best fit their social status and arouse their intellect, whereas lower educated persons are more attracted to entertainment programs (e.g. Kuipers, 2006). Other scholars have focused on family background and parental media socialization activities to explain social differentiation in cultural or media tastes (Kraaykamp, 2001; Lareau, 2003; Verboord & Van Rees, 2003). Within the home, media consumption is a recurrent daily activity and a regular topic of family conversation (Buerkel-Rothfuss & Buerkel, 2001; Lull, 1988). Hence, parental media socialization offers a highly plausible explanation for the development of a specific media taste.

The current chapter seeks to gain a better understanding of how an individual's media taste develops by scrutinizing the intergenerational transmission of media preferences and integrating the lifestyle perspective herein. The first research question reads as follows: *To what extent do parental media socialization activities during childhood affect a person's current media taste?* Although parental socialization activities appear to be a primary factor in the development of an individual's cultural and media taste (Kraaykamp, 2001; Nagel & Ganzeboom, 2002), little is known about how media taste is transmitted from generation to generation. Hence, this study hopes to reveal how parents actually foster their children's media taste: via the example they set (through

²⁶ A slightly different Dutch version of this chapter is published as: Notten, N., Kraaykamp, G., & R. Konig (2011). *Mediaoverdracht in het ouderlijk gezin. De gevolgen van ouderlijke mediasocialisatie voor huidige lees- en televisievoorkeuren*. *Mens en Maatschappij*, 86: 181-202. A previous version of this chapter was presented at the ISA World Congress of Sociology 2010 (Gothenburg, Sweden) and the IGEL Conference 2010 (Utrecht, the Netherlands) as: *Family Matters: A study of the intergenerational transmission of media taste*.

parents' own media behaviors), via media guidance activities (through parent-child interactions on media), and via parents' influence on their children's cultural (i.e. cognitive) competencies. Accordingly, we pose a second, more specific research question: *Via what pathways do parental media socialization activities during childhood affect a person's current media taste?*

This study contributes to existing research by focusing explicitly on the role of parents in the development of media tastes, though it also acknowledges the importance of a person's own characteristics alongside parental media socialization activities. We address both direct and indirect long-term effects of the example parents set in their own use of media and of the media guidance provided by parents on (adult) children's reading and television viewing preferences. To test our expectations we apply structural equation modeling (path analysis) on data from the Family Survey of the Dutch Population (De Graaf, De Graaf, Kraaykamp & Ultee, 2003; Kraaykamp, Wolbers & Ruiters, 2009). Our research interest lies in the development of highbrow and lowbrow reading and television tastes for respondents born between 1955 and 1984 (N=2,539).

5.2 Theory and hypotheses

In our analysis of the development of media taste we differentiate between two media sources, reading and television, and between two types of content, highbrow and lowbrow. Firstly, reading is observed as a socially rewarded leisure activity that generates cognitive and language competencies (Leseman & De Jong, 1998; Kloosterman, Notten, Tolsma & Kraaykamp, 2010). But there is surely a difference between highbrow reading and lowbrow reading. Highbrow or serious reading content, is assumed to be more cognitively stimulating, and is associated with a higher social status compared to the reading of popular books, which this study classifies as lowbrow. Secondly, (excessive) television viewing on the whole is perceived as a low status activity and as offering little cognitive stimulation. Nonetheless, as with reading, the content of television programs varies (Kuipers, 2006; Van Rees & Van Eijck, 2003). People can choose to view informative and cultural programs or watch purely entertainment programs like soap operas and game shows. Thus, similar to reading, television taste can be categorized as highbrow or lowbrow.

In the process of intergenerational transmission of cultural resources, the relevance of parental socioeconomic status appears to recede when actual parental cultural and media socialization activities are taken into account (De Graaf, De Graaf & Kraaykamp, 2000; Sullivan, 2001). Hence, we do not include parental socioeconomic status in our hypotheses, though we do control for this factor in our analyses. Next, sociological scholars studying cultural socialization argue that a person's (i.e. future parent's) cultural or media taste, or preference, is relatively stable from young adulthood (e.g. Bourdieu, 1984; Lareau, 2003) and gives direction to possible parental cultural practices. In line with this notions, pedagogical and media studies show that parents'

own (media) preferences and values lead to specific parent-child interactions on media use (Darling & Steinberg, 1993; Gentile & Walsh, 2002; Van der Voort, Nikken & Van Lil, 1992). Therefore, we advocate that parents' own media preferences, that is, the example parents set in their use of media, precede parental media guidance activities and are the starting point of our theoretical construct.

5.2.1 Parental reading and television viewing example: the imitation perspective

Overall, and in line with social learning theory, intergenerational transmission of cultural and media taste is found to occur mainly through 'learning by observation' (Bandura & Walters, 1963; Kraaykamp, 2001; Verboord & Van Rees, 2003; McLeod & Brown, 1976). Parents set an example, foremost unintentionally, and children follow it, imitating their parents' behavior. For instance, when parents set an example of highbrow television viewing, their children develop a preference for highbrow television content as well. Hence, by exposing children to their own daily media behavior, parents familiarize and nurture their children with a certain media taste. This observational or social learning perspective fits nicely with Bourdieu's cultural reproduction thesis. Bourdieu's reproduction notion assumes that parents transmit their cultural resources to their children, with high-status parents especially passing on highbrow cultural preferences to the next generation (Bourdieu, 1984). Following this line of reasoning, we hypothesize that *individuals who were socialized with parental highbrow reading and highbrow television viewing during childhood, currently read more highbrow books and watch more highbrow television content.*

Some scholars have studied the intergenerational transmission of lowbrow reading and television preferences (e.g., Elchardus & Siongers, 2003; Kraaykamp, 2001). It is reasonable to expect that, even though a popular taste is socially and cognitively less rewarding, children whose parents exhibit lowbrow media preferences will tend to imitate those preferences. Following the imitation perspective, we expect that *individuals who were socialized with an example of parental lowbrow reading and lowbrow television viewing during childhood currently read more lowbrow books and watch more lowbrow television content.*

5.2.2 Parental reading and television guidance: the parent-child interaction perspective

Parents may also socialize their offspring's media taste more intentionally by providing media guidance (Austin, 2001; Leseman & De Jong, 1998; Notten & Kraaykamp, 2009a; Valkenburg, Krömer, Peeters & Marseille, 1999). By mediating children's reading and television viewing behavior, for instance, by reading books aloud or by discussing television programs, parents may actively foster their offspring's media use and taste. Earlier research, indeed, demonstrates that reading guidance encourages children's overall reading proficiency (Bus, Van IJzendoorn & Pelligrini, 1995; Kloosterman et al., 2010) and especially stimulates children's highbrow reading competencies and interest

in more complex reading content (Kraaykamp, 2003; Leseman & De Jong, 1998). Hence, we hypothesize that *individuals who were socialized with parental reading guidance during childhood currently read more highbrow books*. Following this line of reasoning, parents are less likely to intentionally guide their children to become popular book readers. So, we expect *individuals who were socialized with parental reading guidance during childhood currently to read fewer lowbrow books*. Note that previous empirical research indicates that parental reading guidance might stimulate enjoyment of popular reading content as well (Kraaykamp, 2003).

Parental television guidance is often seen as a preventive or protective socialization activity because of the potential harmful effects of (popular) television viewing for children's development (Buerkel-Rothfuss & Buerkel, 2001; Nathanson, 1999). The most effective and common parental strategies to foster healthy television habits in children are restrictive guidance, as in setting television rules, and instructive guidance, as in critically discussing television content with children. Children who experience restrictive and instructive parent-child interaction on television viewing time and content have been found to be more modest and critical television viewers (Brown, 2001; Buijzen & Valkenburg, 2005). We hypothesize that *individuals who were socialized with restrictive and instructive parental television guidance during childhood currently watch more highbrow television content and less lowbrow television content*.

A third type of parental television mediation identified in media research is parental social coviewing, that is, parents and children watching television together without (critical) communication about content (Valkenburg et al., 1999). The role of coviewing in fostering healthy (i.e. favorable) television habits tends to be disadvantageous, however, rather than advantageous (Austin, 2001; Buerkel-Rothfuss & Buerkel, 2001). Coviewing often merely represents (more) time spent viewing television. Additionally, when parents watch television without commenting, children interpret their parents as approving of all that is shown, including non-stimulating or even detrimental television content (Brown, 2001; Nathanson, 1999). Thus, in families where coviewing is the dominant parental guidance strategy, children are not encouraged to become critical or serious television viewers. This study therefore expects that *individuals who were socialized with parental coviewing during their childhood currently watch more lowbrow television content and less highbrow television content*.

5.2.3 Intergenerational transmission of media taste: via what pathways?

This study assumes that parental media socialization occurs by the example parents set and the guidance parents offer, and that there is a sequential or causal relation between these activities. As such, it elaborates on previous research which shows that parents' own preferences and values significantly affect the actual guidance they provide to their children (Hoover-Dempsey & Sandler, 1997; Yaish & Katz-Gerro, 2010), also when it comes to media use (e.g., Livingstone, 2007; Van der Voort, Nikken & Van Lil, 1992).

For instance, parents concerned about television being a non-rewarding or empty distraction tend to be more actively involved in their offspring's television consumption (Barkin et al., 2006), and parents who themselves are avid readers are more apt to guide their children's reading practices (Notten & Kraaykamp, 2009a). In general, media guidance aimed at stimulating beneficial media use is a socialization activity most commonly found among parents oriented towards highbrow media consumption (Gentile & Walsh, 2002; Notten & Kraaykamp, 2009a). Parents preferring popular media content are less proactive in guiding their children to become critical media users (e.g., Lareau, 2003). This leads to the expectation that parental media guidance partly mediates the influence of the example parents set in their own media use on their (adult) children's media taste.

In studying the long-term effects of parental media socialization on the development of an individual's media tastes, we also consider a person's educational attainment as a potential mediating factor. On the one hand, lifestyle and media research suggest that inequality in media taste occurs because of differentiation in individual and cultural competencies, often measured by a person's educational level (Ganzeboom, 1982; Rosengren & Windahl, 1989; Bennett, 2006; Konig, Rebers & Westerik, 2009). On the other hand, research has shown that beneficial (i.e. cognitively stimulating and high-status) media socialization activities, such as parental highbrow television viewing and reading guidance, positively affect children's educational success (Georg, 2004; Kloosterman et al., 2010). Furthermore, socializing children with a popular media taste appears to hinder their cognitive development and educational success (Schmidt et al., 2008; Notten & Kraaykamp, 2010). Integrating these two perspectives leads to the expectation that children lacking beneficial parental media socialization will tend to attain lower levels of education and end up with lower levels of cultural and media competency, eventually leading to a preference for popular or lowbrow media content. Children whose parents have more favorable cultural and media skills will likely acquire higher levels of education, ultimately resulting in more highbrow media habits. Thus, with educational success being a result of and a relevant factor in the process of media socialization, we expect a person's own educational level to partly mediate the effects of the parental media example and parental media guidance on their own media taste. Prior research indicates that parents play a more pronounced role than schooling in a person's cultural socialization (e.g., Nagel & Ganzeboom, 2002). Consequently, we expect the effect of parental media socialization to remain significant, even when we control for individual educational level.

5.3 Methodology

5.3.1 Data

To answer our research questions and to test our hypotheses we use data from two waves of the Family Survey of the Dutch Population (FSDP), a cross-sectional survey of a nationally representative sample of the Dutch population, conducted in 2003 and 2009 (De Graaf et al., 2003; Kraaykamp, Wolbers & Ruiters, 2009). The initial number of respondents in the 2003 FSDP was 2,174. The 2009 FSDP included 2,969 respondents. The FSDP includes structured face-to-face interviews and self-administered written questionnaires with both primary respondents and their partner (if the primary respondent is married or cohabiting). Because the childhood socialization of the partner most likely took place apart from that of the primary respondent, this study includes each as an individual respondent.²⁷ The FSDP dataset contains detailed information on several aspects of an individual's life course and life situation for respondents between ages 18 and 70. The current study makes use of retrospective questions on childhood in-home media experiences, parental social background and family composition, and the respondent's own educational career and current media consumption. Because Dutch television broadcasting took off around 1955, parental television socialization is not deemed feasible for respondents born before 1955. We therefore decided to exclude these respondents, as well as respondents who experienced no parental television socialization because they reported having no television in the family home during their youth (together 40.5% of the total). To analyze long-term effects of parental media socialization, obviously a respondent's socialization has to be completed. Therefore, we selected respondents who were not living with either of their parents (99.1% of the total) and those older than 25 years at the time of the interview (97.2% of the total). After this selection, our dataset was left with 2,695 individuals with birth years between 1955 and 1984, between 25 and 54 years of age.

5.3.2 Measurements

We investigate two types of media use: book reading and television viewing. For both media types we analyzed the development of 'highbrow' and 'lowbrow' taste. Because our focus is on the intergenerational transmission of media taste, we made use of conceptually equivalent genres and categories to measure parents' and respondents' media consumption. All variables and scales measuring respondents' media taste and parental media socialization activities were standardized by the same procedure. Scores were ranked between 0 and 1 on basis of the proportion that answered an item with 'often' ($M=0.50$ for all items).

²⁷ Performing our analyses on primary respondents only, as well as applying a multilevel design taking into account the nesting of respondents and partners in a single household, produced virtually the same results.

Respondents' media taste was measured by four distinct types of reading and television consumption, as confirmed by factor analyses. For each item involved, answer categories were (0) 'never', (1) 'sometimes' and (2) 'often'. Respondents' *highbrow book reading* was constructed by taking the mean reading frequency of the following genres: (a) Dutch or translated literature, (b) novels in a foreign language and (c) popular science books. Respondents' *lowbrow book reading* was represented by a scale averaging the mean reading frequency of (a) detective, science fiction and war novels and (b) romantic novels. Respondents' *highbrow television viewing* was measured as consumption of (a) informative programs and (b) cultural-artistic programs. Respondents' *lowbrow television viewing* was constructed as an average score for watching popular programs such as (a) talk shows, (b) criminality shows, (c) reality shows and (d) soap operas. Parental media example refers to parental book reading and television viewing at the time the respondent was around 15 years old. Respondents reported the frequency with which their parents read five book genres, and factor analyses confirmed a highbrow and lowbrow parental reading dimension.²⁸ Here again, answer categories were (0) 'never', (1) 'sometimes' and (2) 'often'. We constructed *parental highbrow book reading* by taking the average score of the father's and mother's reading of (a) Dutch or translated literature, (b) novels in a foreign language and (c) popular science books. *Parental lowbrow book reading* was represented by the mean score of both the father's and mother's reading of (a) detective, science fiction and war novels and (b) romantic novels. For television viewing, a confirmative factor analysis on six types of television programs established a highbrow and lowbrow dimension.²⁹ We measured *parental highbrow television viewing* by averaging respondents' reports of two items: (a) parents watching informative television programs and (b) parents watching cultural-artistic programs. *Parental lowbrow television viewing* was constructed as the mean of parental viewing of four types of television programs: (a) films and series, (b) game shows, (c) sports and (d) soap operas. We acknowledge that the genre 'films and series' might contain serious content as well. Factor analysis, however, clearly indicated this genre as lowbrow.

Parental reading guidance was measured by taking the mean score of five items on parent-child reading interaction, after standardization: (a) 'As a toddler I was read to by one of my parents', (b) 'For my birthday/on Christmas/from Santa Claus 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' ($\alpha=0.85$). Answer categories again were (0) 'never', (1) 'sometimes' and (2) 'often'. Parental television guidance was measured by respondents' reports on nine specific parental television guidance

²⁸ Mothers' reading of Dutch and translated literature loaded on both factors, but higher on serious reading. Parents' reading of detectives, science fiction and war novel also loaded on both factors, but higher on popular reading. On theoretical grounds, mother's reading of literature was classified to serious reading, and detective, science fiction and war novel reading was designated to the popular reading genre.

²⁹ Sports loaded on both factors, but predominantly on the popular dimension

activities when the respondent was between 5 and 12 years of age. We performed a confirmatory factor analysis, revealing that the indicators indeed represent the three theoretically expected types of parental television guidance (i.e. television mediation): restrictive guidance, instructive guidance and covieing (Austin, 2001; Valkenburg et al., 1999). For the variables on television guidance, answers were given on a 4-point scale ranging from (0) ‘entirely untrue’ to (3) ‘entirely true’. *Parental restrictive television guidance* was constructed using three items: (a) ‘My parents limited the hours I was allowed to watch TV’, (b) ‘My parents decided what I could watch on TV’ and (c) ‘My parents had a specific TV timetable for the children’ ($\alpha=0.76$). We measured *parental instructive television guidance* by taking the mean score of (a) ‘My parents discussed with me why something seen on television was wrong’, (b) ‘In our family television programs were often discussed’ and (c) ‘My parents helped me to understand what I saw on television’ ($\alpha=0.77$). Respondents’ reports on *parental television covieing* refer to three items: (a) ‘I often watched together with my parents a television show we both liked’, (b) ‘With my parents I could laugh about something on TV’ and (c) ‘I often watched together with my parents television programs we both were interested in’ ($\alpha=0.78$). Scales were created taking average scores, and again, were standardized between 0 and 1 employing a ranking procedure.

Respondents’ educational level was measured as the number of years required to obtain the attained educational level ranging from 6 years (primary school) to 21 years (PhD).

We measured parental social background by the parents’ educational level and occupational attainment. To create the variable *parental educational level* we used the educational attainment of the highest educated parent, measured as the number of years required to obtain that educational level (6 - 21 years). We measured *parental occupational status* by taking the maximum of the father’s and mother’s score on the International Socio-Economic Index of Occupational Status (ISEI) (Ganzeboom, De Graaf & Treiman, 1992) when the respondent was 15 years old.

We further included as variables three family compositional factors that have proven to be influential in socialization processes. The first is *mother’s age at childbirth*, referring to the age of the mother when the respondent was born. Outliers were eliminated by rounding extremely young mothers up to 16 years of age (10 respondents) and topping down extremely old mothers to the age of 45 (9 respondents). The second family compositional factor is having a *working mother*, measured by two items: (a) ‘Was your mother employed for at least one year during preschool?’ and (b) ‘Was your mother employed for at least one year during primary school?’. This variable thus indicates whether the mother was either (0) non-working or (1) working during the respondent’s childhood. The third family compositional factor is *parental divorce*, indicating whether a parental divorce was experienced during the respondent’s childhood (ages 0–12), with categories being (0) ‘no parental divorce’ and (1) ‘parental divorce’ (6.2% of the total).

Finally, we controlled for respondents’ sex and birth year. *Sex* indicates whether the respondent is (0) male or (1) female, and the variable *birth year* ranges from 1955 to

Table 5.1 Descriptive statistics of all variables

	Minimum	Maximum	Mean	Std. Deviation
Respondents’ media taste				
<i>Respondents’ highbrow reading</i>	0.17	1.00	0.50	0.28
<i>Respondents’ lowbrow reading</i>	0.21	1.00	0.50	0.28
<i>Respondents’ highbrow television viewing</i>	0.00	0.99	0.50	0.29
<i>Respondents’ lowbrow television viewing</i>	0.04	1.00	0.50	0.29
Parental media socialization				
<i>Parental highbrow reading</i>	0.00	1.00	0.50	0.29
<i>Parental lowbrow reading</i>	0.00	1.00	0.50	0.29
<i>Parental highbrow television viewing</i>	0.00	0.99	0.50	0.28
<i>Parental lowbrow television viewing</i>	0.00	0.98	0.50	0.29
<i>Parental reading guidance</i>	0.02	0.96	0.50	0.29
<i>Parental restrictive television guidance</i>	0.02	0.96	0.50	0.29
<i>Parental instructive television guidance</i>	0.02	0.99	0.50	0.29
<i>Parental television covieing</i>	0.00	0.97	0.50	0.29
Respondents’ educational level				
<i>Respondents’ educational level (yrs)</i>	6.00	21.00	12.68	2.99
Parental social background				
<i>Parental educational level</i>	6.00	21.00	10.8	3.18
<i>Parental occupational status</i>	10.00	90.00	47.06	15.02
Family composition				
<i>Parental divorce (1=divorced)</i>	0	1	0.06	
<i>Mother’s age at childbirth</i>	16.00	45.00	28.36	5.69
<i>Working mother (1=working)</i>	0	1	0.35	
Control variables				
<i>Respondents’ birth year</i>	1955.00	1984.00	1966.53	7.15
<i>Respondents’ sex (1=female)</i>	0	1	0.52	

Source: FSDP 2003, 2009; N=2,539

1984. Respondents with a missing score on one of the variables were omitted (5.8% of all respondents). Our final dataset thus contains 2,539 individuals. Table 5.1 presents a detailed description of the variables.

5.3.3 Modeling strategy

The aim of this chapter is to explain differentiation in highbrow and lowbrow media taste by simultaneously analyzing direct and indirect effects of various parental media socialization activities. We therefore applied structural equation modeling using Lisrel 8.8 (Jöreskog & Sörbom, 1996). Structural equation modeling enables us to test the entire hypothesized path model at once. We estimated two separate (path) models, one for reading taste (Model 1) and another for television taste (Model 2). We included all exogenous and endogenous variables as observed variables in our SEM models. Although not shown in our figures, in both models we allowed for a correlation between the errors of variables within the following groups: parental media example variables, parental television guidance activities, and the variables measuring respondents' highbrow and lowbrow media taste. In performing our final analyses we deleted non-significant paths (β s) from the models. The root mean square error of approximation (RMSEA) indicates a good fit for both the reading and television model (resp., 0.031 and 0.020). Figures 5.1 and 5.2 show the results of our SEM models. Tables 5.2 and 5.3 present the total, direct, and indirect effects. Bivariate correlations are shown in Appendix 5.

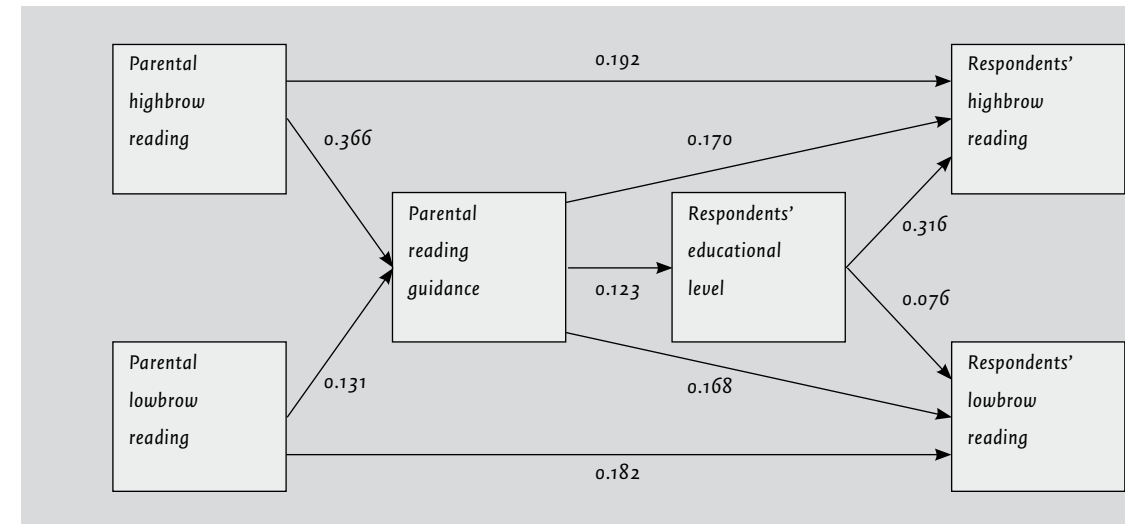
5.4 Results

5.4.1 Differentiation in reading taste: effects of parental reading socialization

Figure 5.1 shows the direct standardized effects (β s) of our structural equation model estimating the influence of parental reading socialization on a person's highbrow and lowbrow reading taste. Respondents' current highbrow reading appears to be directly affected by a parental example of highbrow reading during youth ($\beta=0.192$). As expected, children imitate their parents' literary reading habits, and this socialization effect remains influential later in life. Furthermore, parents' efforts in guiding their offspring's reading behavior in childhood result in more highbrow reading in adulthood ($\beta=0.170$), confirming long-term effects of parental reading guidance socialization activities. Respondents' lowbrow reading frequency is stimulated by an example of parental lowbrow reading during childhood ($\beta=0.182$), and, in contrast to our expectations, also by parental reading guidance ($\beta=0.168$). So children do imitate their parents' lowbrow reading behaviors and this socialization effect lasts into adulthood. Though we presumed reading guidance to be a high-status parental socialization activity aimed at transmitting highbrow reading preferences, our results clearly indicate that parental reading guidance stimulates children's reading in general, virtually regardless of content.

In line with prior studies and elaborating on findings in the previous chapters, the results in Figure 5.1 demonstrate that parents who themselves read are more inclined to guide

Figure 5.1 Structural equation model of the intergenerational transmission of reading taste.



Note: Coefficients are standardized significant ($p < 0.05$) direct effects (β s), non-significant direct effects (β s) are deleted. Controlled for parental SES, family composition and respondents' sex and birth year (not presented) $Df=4$; Chi-square= 13.583; RMSEA=0.031; AGFI=0.981

their children's reading (Notten & Kraaykamp, 2009a). This seems especially true for parents with a highbrow reading taste ($\beta=0.366$), though parents preferring popular reading content also actively stimulate their children's development of reading skills ($\beta=0.131$). Also, parental reading guidance significantly enhances children's educational success ($\beta=0.123$) (Notten & Kraaykamp, 2010), which in turn appears to be a relevant stimulating factor for both highbrow ($\beta=0.316$) and, though to a far lesser extent, lowbrow reading ($\beta=0.076$). Consequently, there seem to be two distinct pathways via which the parental reading example in childhood (indirectly) affects a person's current reading taste: via parental reading guidance, and, subsequently, via children's school success.

Table 5.2 clearly shows that the total effect of an example of parental highbrow reading during childhood ($\beta=0.269$) on a person's current highbrow reading is partly indirect ($\beta=0.076$). For the development of a lowbrow reading taste, the total effect of a parental example of lowbrow reading ($\beta=0.206$) also consists of a significant indirect component ($\beta=0.023$). Parental reading guidance and children's educational level both appear to be relevant factors mediating the parental example. Yet, our results indicate that children's imitation of their parents' reading habits is the main mechanism underlying the intergenerational transmission of reading taste. We find that 71 percent of the total effect of a parental highbrow reading example on respondents' current highbrow reading is direct. When it comes to reproducing lowbrow reading preferences, about 88 percent of the effect of a parental example of lowbrow reading is direct. On the whole,

the actual process of reading socialization seems virtually identical for highbrow and lowbrow reading.

Note that a person's current highbrow reading is indirectly affected by a parental example of popular reading during childhood ($\beta=0.027$), while a parental highbrow reading example also influences a person's current popular reading taste ($\beta=0.065$). These findings suggest that, next to content preferences, a positive attitude towards reading in general is also transmitted over generations. Moreover, it seems that in predicting highbrow reading habits, the impact of respondents' educational level slightly outweighs the parental socialization effects.

Table 5.2 Total, direct, and indirect effects of the intergenerational transmission of reading taste, standardized effects (β s), Lisrel estimates (maximum likelihood)

	Respondents' highbrow reading			Respondents' lowbrow reading		
	Total	Direct	Indirect	Total	Direct	Indirect
Independent variables						
Parental reading socialization						
Parental highbrow reading	0.269 *	0.192 *	0.076 *	0.065 *		0.065 *
Parental lowbrow reading	0.027 *		0.027 *	0.206 *	0.182 *	0.023 *
Parental reading guidance	0.209 *	0.170 *	0.039 *	0.177 *	0.168 *	0.009 *
Respondents' educational level						
Respondents' educational level	0.316 *	0.316 *		0.076 *	0.076 *	

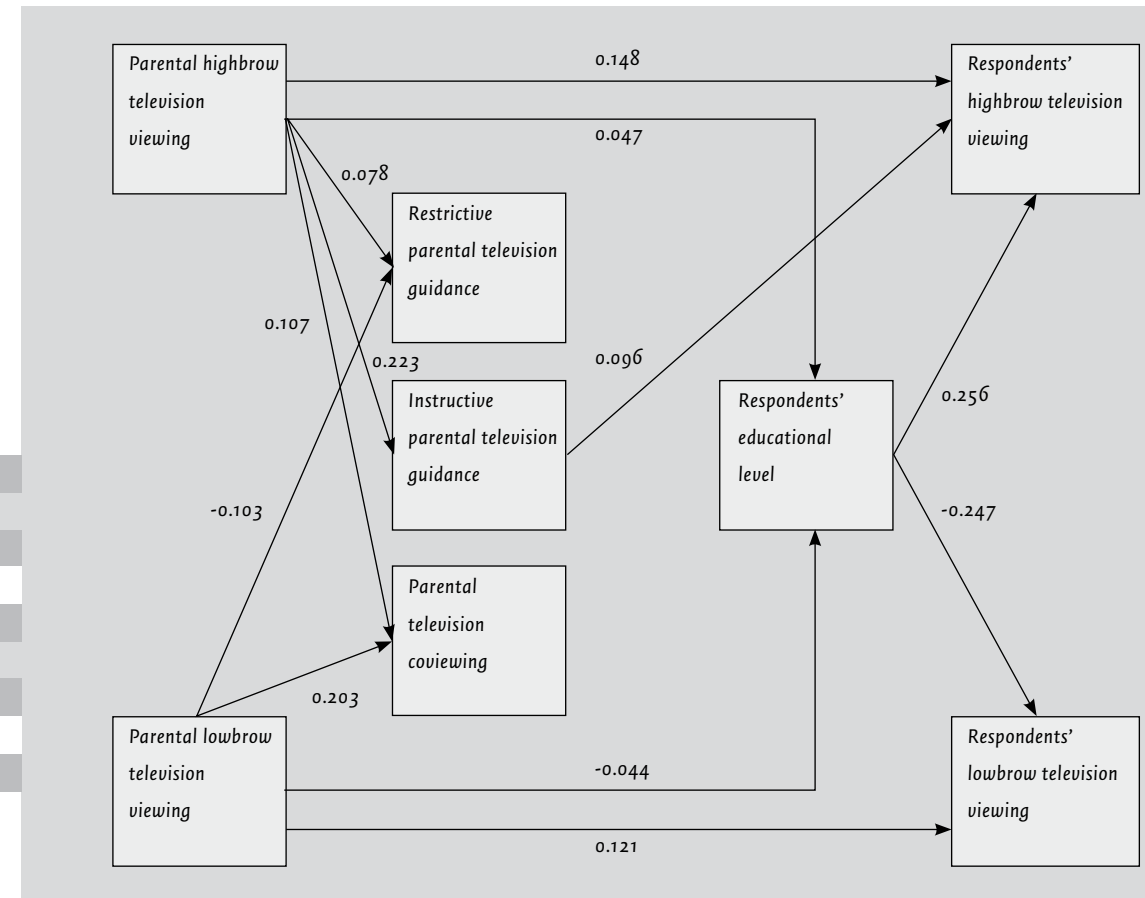
Significance: * $p < 0.05$ Source: FSDP 2003, 2009; N=2,539 Df=4; Chi-square= 13.583; RMSEA=0.031; AGFI=0.981

5.4.2 Differentiation in television taste: effects of parental television socialization

Figure 5.2 shows the SEM results regarding television taste. As we expected, respondents' highbrow and lowbrow television viewing taste is directly affected by a parental highbrow or lowbrow television example (resp., $\beta=0.148$ and $\beta=0.121$). Apparently, children imitate their parents' television preferences, and these effects last into adulthood. A person's television viewing taste is also directly affected by parental instructive television guidance. As we expected, parent-child interaction on television content during childhood, for instance, by discussing television content, seems to result in a preference for highbrow television programs in adulthood ($\beta=0.096$). Parental coviewing and television rules in one's youth appear to have no significant lasting effects when it comes to television viewing taste.

In line with prior studies and findings in the previous chapters, Figure 5.2 demonstrates that highbrow media-orientated parents provide more restrictive ($\beta=0.078$) and instructive ($\beta=0.223$) television guidance than parents who are less familiar with highbrow television content (see also Notten & Kraaykamp, 2009a). Although

Figure 5.2. Structural equation model of the intergenerational transmission of television taste.



Note: Coefficients are standardized significant direct effects (β s), non-significant direct effects (β s) are deleted.

Controlled for parental SES, family composition and respondents' sex and birth year (not presented)

Df=11; Chi-square=20.972; RMSEA= 0.020; AGFI=0.987

contrasting our expectations (but in line with chapter 2), parents preferring highbrow television programs also frequently coview television programs with their children ($\beta=0.107$). This is probably a function of the social character of television viewing. Our results further indicate that parents with a popular television taste coview more often ($\beta=0.203$), also more than parents with a highbrow television taste, and are less likely to set rules limiting their children's television viewing ($\beta=-0.103$). We also find that a parental example of popular television viewing in childhood limits a person's educational success ($\beta=-0.044$) (Notten & Kraaykamp, 2010), whereas exposure to

parental highbrow television habits enhances school success ($\beta=0.047$).³⁰ Furthermore, a higher educational level seems to stimulate highbrow television viewing ($\beta=0.256$) and to restrict lowbrow television consumption ($\beta=-0.247$).

Table 5.3 presents the total, direct, and indirect effects of parental television socialization activities on a person's current television taste. The total effect of a parental highbrow television example on respondents' current highbrow television viewing ($\beta=0.182$) is partly indirect ($\beta=0.034$), both via parents' instructive television guidance (i.e. parent-child interaction on television content) and via the positive influence of parental highbrow television viewing on the respondent's educational level (see Figure 5.2). A noteworthy finding is that a highbrow television taste is indirectly negatively affected by a parental example of lowbrow television viewing during childhood ($\beta=-0.012$), via respondents' school success. This seems to corroborate the negative or unfavorable status of lowbrow television viewing, as well as the possible harmful effects of (lowbrow) television exposure for children's cognitive development (Notten & Kraaykamp, 2010). Next to a direct impact of a parental lowbrow television example during childhood on a person's current lowbrow television taste, we find a positive indirect effect as well ($\beta=0.011$). Apparently parents preferring popular television content pass on their television taste also by its negative influence on their children's educational success.

Concerning the intergenerational transmission of television taste, we conclude that the direct effect of the parental television example is dominant. This means that imitation explains most (about 85 percent) of the parental influence in fostering both serious and popular television taste in children. The underlying mechanism is not entirely identical: instructive parental television guidance is relevant for the reproduction of highbrow television preferences. Yet, in fostering popular television habits parental television guidance seems irrelevant. Respondents' educational level appears to be a relevant factor mediating the imitation process for both highbrow and lowbrow television tastes. Note that in predicting individual television preferences, own cultural competencies, here measured by educational level, outweigh the effects of all parental television socialization activities.

³⁰ Additional analyses revealed that this finding is in line with the results in chapter 3 when analyzing reading and television socialization effects separately.

Table 5.3 Total, direct, and indirect effects of the intergenerational transmission of television taste, standardized effects (β s), Lisrel estimates (maximum likelihood)

	Respondents' highbrow TV viewing			Respondents' lowbrow TV viewing		
	Total	Direct	Indirect	Total	Direct	Indirect
<i>Independent variables</i>						
Parental television socialization						
Parental highbrow television viewing	0.182 *	0.148 *	0.034 *	-0.011 *		-0.011 *
Parental lowbrow television viewing	-0.012 *		-0.012 *	0.132 *	0.121 *	0.011 *
Parental restrictive television guidance						
Parental instructive television guidance	0.096 *	0.096 *				
Parental television coviewing						
Respondents' educational level						
Respondents' educational level	0.256 *	0.256 *		-0.247 *	-0.247 *	

Significance: * $p < 0.05$ Source: FSDP 2003, 2009; N=2,539 Df=11; Chi-square=20.972; RMSEA=0.020; AGFI=0.987

5.5 Conclusion and discussion

The first aim of this chapter was to gain insight into the development of individual media taste by studying the role of parental media socialization activities as well as an individual's cultural competency. In doing so, we focused on parents' highbrow and lowbrow media example, as well as on parental media guidance activities and a person's educational level. The second purpose of this study was to further analyze the actual process by which media taste is intergenerationally transmitted. We proposed that a person's current reading and television taste develops through direct imitation of the media example that parents set in one's childhood, but this reproduction or imitation process may also occur less directly, via parental media guidance and respondents' educational success. To analyze the intergenerational transmission of parental reading and television taste, we used information on childhood experiences (media socialization and family situation) and on current individual characteristics of 2,539 respondents from two waves of the Family Survey of the Dutch Population (De Graaf et al., 2003; Kraaykamp et al., 2009). By estimating structural equation models, we analyzed the relevance of parental socialization processes for the development of an individual's media taste.

Our main conclusion is twofold. First and foremost, the example parents set in their own media use and the guidance parents offer their children have lasting effects on their (adult) children's media taste. Parents set a specific reading or television viewing example which children tend to imitate, and this socialization effect remains influential during the rest of these children's lives. Parent-child interaction on media consumption is another relevant factor in the development of an individual's media taste. Parental reading guidance during childhood proved highly relevant in encouraging both lowbrow

and highbrow reading. We also found that parental instructive television guidance has long-term effects on a person's current highbrow television taste. In analyzing the actual process by which parental media socialization takes place, we found that the intergenerational transmission of reading and television taste occurs predominantly by direct imitation. However, in this imitation process, the mediating role of parental guidance and a person's own educational attainment may not be disregarded.

Certainly this study has limitations. First of all, it makes use of retrospective data, which is sometimes found to be less appropriate because of possible memory bias. Previous research on the same data however shows no or barely significant biases due to systematic and random error in retrospective measures of parental cultural socialization (e.g., De Graaf, De Graaf & Kraaykamp, 2000; De Vries & De Graaf, 2008). Nonetheless, we acknowledge that the direct effects of parental media example may be slightly overestimated due to memory effects. Possible random error will not affect our conclusions regarding the process of media socialization. Second, the variables used to measure media content preferences obviously include some aspects of consumption intensity. However, for reasons of collinearity and comparability, the current study did not include variables controlling for the time parents spent using media. Future research might find ways to deal more adequately with this issue.

The current research shows that the parental media socialization experienced during childhood has long-term consequences for a person's current television and reading taste. Moreover, by analyzing the actual socialization process we elaborated on the previous chapters, and we found that the effects of the parental media example (i.e., imitation processes) are mediated to some degree by parental media guidance and a person's educational attainment. Remarkably, childhood parental television guidance appears to affect a person's current television taste only modestly. Since children spend a lot of time watching television, and parents' concerns about children's television exposure are widespread, we expected parental television guidance activities to play a more pronounced role within the media socialization process. Perhaps this research will stimulate further studies to shed more light on the long-term effects of parental media socialization, particularly regarding parental media guidance. This could constitute a valuable step towards understanding the long-term impact of parental socialization activities in the use of other digital media.

6 Parents, television and current weight status (BMI)³¹

6.1 Introduction

Television habits in the family home seem to have a major effect on children's well-being, both mental and physical (e.g. Valkenburg, 2004). A repeatedly found negative consequence of exposure to excess television is (childhood) obesity (Dietz & Gortmaker, 1985; Gable, Chang & Krull, 2007; Veerman, Van Beeck, Barendregt & Mackenbach, 2009). Television consumption is thought to affect a child's weight in various ways. For instance, watching television, which is a passive and sedentary activity, might replace physically challenging activities such as playing outdoors (Lazarou & Soteriades, 2009). Television viewing may also expose children to advertisements for unhealthy (high-caloric) foods. Such advertisements teach children to value such foods, leading to snacking, unhealthy diet and ultimately weight problems (e.g. Buijzen, Schuurman & Bomhof, 2008).

Incidence of obese and overweight children has increased alarmingly worldwide, and is nowadays a foremost health threat (OECD, 2011). Childhood obesity is associated with a higher chance of premature death and disability in adulthood (WHO, 2011). Many parents therefore promote their children's health by providing a nutritious diet and enabling sports participation, but they might also guide their offspring's television consumption. Parents influence their children's television viewing behavior through the example they set with their own viewing habits and by actively mediating their children's television viewing. For instance, they might discuss the content of programs with their children or restrict their offspring's television consumption (Nathanson, 1999; Valkenburg et al., 1999). Since parental media socialization practices are socially differentiated, not all children are equally guided to become moderate and critical television viewers (Notten & Kraaykamp, 2009a). This might lead to social inequality in individuals' adult health behaviors and weight status.

Although the relation between a person's television viewing habits and their bodyweight has been previously investigated for both children and adults, few studies have examined the possible long-term consequences of parental television socialization activities for weight status in adulthood (e.g. Harris & Bargh, 2009). This is remarkable, since parents are children's major counseling agents and are influential in guiding (i.e. controlling) their children's lifestyles and eating habits (Cullen et al., 2001; Kremers, Burg & De Vries, 2003; Lareau, 2003). Most research has focused on the short-term effects of children's television consumption and parental involvement (e.g. Nathanson,

³¹ A previous version of this chapter was presented at the ISA World Congress of Sociology 2010 (Gothenburg, Sweden) and the 'Dag van de Sociologie' (Groningen, the Netherlands) as: Parents, Television and Health. How does parental television socialization affect current weight status? Co-authors are G. Kraaykamp and J. Tolsma. This chapter is currently under review.

1999; Buijzen, 2009). Nevertheless, in the previous chapters of this study long-lasting effects of parental media socialization on children's development and behavior are found (see also Notten & Kraaykamp, 2009b, 2010). This particular chapter investigates whether the example parents set with their own television viewing and the guidance they provide in their children's television consumption have enduring effects on their offspring's weight status later in life. Therefore, the first research question underlying this chapter reads as follows: *To what extent do parental television socialization activities during childhood affect a person's current weight status?* Of course after completing the period of parental socialization, a person's own characteristics and behaviors, such as pre-adult weight, educational level and television viewing habits, are likely to mediate the impact of the parental television example and television guidance on current weight status. Thus, we expect a largely indirect effect of parental television socialization on a person's bodyweight. Our second research question reads as follows: *Via what pathways do parental television socialization activities during childhood affect a person's current weight status?*

Most studies on television viewing and bodyweight have an experimental design, focus on a specific subgroup of respondents or analyze short-term effects. This research is innovative in that it focuses on parental television socialization practices during childhood and their long-term effects on (adult) children's weight. Moreover, it studies the effects of the example set by parents (their viewing habits) as well as of parent-child interactions on television consumption (parental television guidance) during a person's youth. We test our hypotheses using representative cross-sectional data from the Family Survey of the Dutch Population (Kraaykamp, Wolbers & Ruiters, 2009), which offers current and retrospective information on respondents' individual life course, family and childhood characteristics. We estimate structural equation models including parental television socialization activities and respondents' childhood television consumption, weight at age 20, educational attainment and own current television habits. Furthermore, we control for parental socioeconomic background and family composition, as well as for respondents' sex and birth year.

6.2 Theory and hypotheses

6.2.1 Explanatory mechanisms

Although genetic factors may play a role in obesity, most research identifies excessive food consumption (i.e. high energy intake) and an unhealthy lifestyle (i.e. low physical activity and energy expenditure) as the major causes of overweight and obesity (Hill, Wyatt, Reed & Peters, 2003; Manios et al., 2009). However, people's lifestyle choices, such as their health behavior and especially food consumption, are strongly predicted by environmental factors (Sund, Jones & Midthjell, 2010). Parents are the most dominant persons nurturing children towards a healthy lifestyle and good eating habits

(Birch & Fisher, 2000; Clarke et al., 2007; Snoek, 2009; Wardle & Carnell, 2007). Parents influence their children, for instance, by their decisions on what to serve at meals and by the rules they set on snacking (Kremers, Burg & De Vries, 2003). Other parental interventions found to be successful in limiting health risks, especially concerning overweight and obesity, are socialization activities to reduce sedentary activities such as television viewing (e.g. Dietz, 2001).

Numerous studies reveal a causal relation between the time children spend watching television and their being overweight or having an unhealthy diet (e.g. Dietz & Gortmaker, 1985; Matheson, Killen, Wang Varady & Robinson, 2004). Some scholars, however, are ambiguous about the precise role of television exposure in explaining weight problems (Robinson et al., 1993; Vandewater, Shim & Caplovitz, 2004). There is general consensus that watching television causes overweight and obesity by one or a combination of the following mechanisms. The first is displacement of physical activity, as time spent viewing television, a sedentary and passive activity, replaces time that otherwise could be spent on more physically challenging activities (Lazarou & Soteriades, 2009; Vandewater, Shim & Caplovitz, 2004). Second, many people eat or overeat while watching television, resulting in increased intake of calories and of unhealthy food ('snacking') (see e.g. Manios et al., 2009; Matheson et al., 2004). Third, food advertising on television may stimulate people to develop an appetite for high-fat and high-sugar food products, which are generally most heavily advertised (Buijzen, Schuurman & Bomhof, 2008; Dixon et al., 2007; Veerman et al., 2009). Finally, watching television lowers the resting metabolism, and thereby mediates the relation between excess bodyweight and television consumption (Klesges, Shelton & Slesges, 1993).

Most empirical research corroborates the 'eating-while-watching-notion' and the 'food-advertising-exposure-notion', and some scholars report lasting effects of these mechanisms into adulthood (Harris & Bargh, 2009; Viner & Cole, 2005). Indeed, children have been found to eat a large proportion of their daily energy while watching television (Matheson et al., 2004), and snack foods especially are consumed during television viewing. Hence, exposure to television and to food advertising, mutually highly correlated, are two major factors underlying the relation between television viewing and a person's weight status.

This study focuses on the long-term effects of television socialization in the childhood home on a person's current bodyweight. According to socialization theories and lifestyle theories, parents imbue their children with certain norms, behaviors and values, and this socialization is thought to start at birth and last into adulthood (Bandura & Walters, 1963, 1977; Bourdieu, 1984; Darling & Steinberg, 1993; Lareau, 2003). The current study analyzes whether parental television socialization practices in a person's childhood affect their adult weight status. It assumes that parents enduringly influence their children's television habits (viewing time and advertising exposure) and weight status (BMI score) by the example they set and by the active guidance they offer during the socialization period.

Previous research has consistently associated demographic and social background features of children and their families (e.g. age, educational level, family composition and family socioeconomic status) with (childhood) television habits as well as with overweight (Brown, Broom, Nicholson & Bittman, 2010; Gable, Chang & Krull, 2007; Sund, Jones & Midthjell, 2010; Wardle, Waller & Martin, 2002). We do not emphasize these factors in our hypotheses. But we do control for their influence in our analyses so as to rigorously assess the long-term impact of parental television socialization, which is the focus of this chapter.

6.2.2 Parental example of television viewing frequency

According to social learning theory (Bandura & Walters, 1963), children learn by observation, and the imitation process is dominated by frequent behaviors of the most influential persons in the environment. Children, hence, copy what their parents do. Via modeling, parents rather unintentionally foster their children's (media) preferences and habits (Notten, Kraaykamp & Konig, forthcoming; Kraaykamp, 2011). From this line of reasoning it follows that when parents set an example of frequent television viewing, their children too will become frequent television viewers. According to the mechanisms mentioned earlier, (excessive) television viewing leads to less physical activity, more opportunity for eating while watching and higher odds of exposure to advertisements for unhealthy foods. Thus, via their functioning as a role model, we expect the time parents spend watching television to affect their children's weight status in the long run. We hypothesize that *individuals who were socialized with frequent (excessive) parental television viewing during childhood have a higher current weight status.*

6.2.3 Restrictive and instructive parental television guidance and covieing

Besides setting an example, parents can foster their children's television habits by providing guidance (Notten & Kraaykamp, 2009a). By restricting or monitoring children's exposure to television, parents may both stimulate their children to become more physically active and restrict opportunities for snacking while watching television. Also, by limiting television viewing, parents reduce children's exposure to food advertisements and their associated negative effects (Buijzen, 2009; Dietz, 2001; Jordan & Robinson, 2008). Such parental television socialization activities are meant to nurture children with a healthy and conscious lifestyle, which they might sustain into adulthood. The most effective and common parental strategies to foster good television habits are setting television rules and critically discussing television content (Nathanson, 1999; Valkenburg et al., 1999). Rules may restrict the time children spend watching television or prevent children from watching certain programs or (commercial) television channels. Restricting television time leaves children with less opportunity to snack while they watch. Also, less time in front of the television reduces exposure to food

advertisements, thus lowering the odds of unhealthy food intake (Buijzen, Schuurman & Bomhof, 2008; Dixon et al., 2007). Finally, although research is ambiguous about this, less television time implies more time for physical activity, which may prevent children from becoming overweight. Therefore, we expect that *individuals who were socialized with restrictive parental television guidance during childhood have a lower current weight status.*

Prior research indicates that restrictive parental guidance is successful predominantly in limiting the television exposure of very young children (from preschool up to around age 7). After all, young children lack the cognitive competency to deal with discussions on television content (e.g. Valkenburg, 2004). Active or instructive parental television guidance, that is, explaining and critically discussing (possibly harmful) television content, would therefore seem to be most fruitful in nurturing older children to become critical viewers (see e.g. Buijzen 2009; Harris & Bargh, 2009). Offered at the appropriate age, instructive parental guidance stimulates children to become more critical television consumers (Notten, Kraaykamp & Konig, 2011). By reducing the impact of food advertisements, instructive parental television guidance may also be directly related to (un)healthy eating habits. We therefore hypothesize that *individuals who were socialized with instructive parental television guidance during childhood have a lower current weight status.*

Scholars agree that parental covieing, that is, parents and children watching television together without any (critical) communication, does not limit children's television exposure, nor does it help children to deal with negative aspects of television exposure and content (Austin, 2001; Nathanson, 1999). It is even likely that parental covieing functions as an indicator of the time parents spend watching television. Overall, children perceive covieing as an endorsement of all (also negative) television content (Nathanson, 2001). Hence, we hypothesize that *individuals who were socialized with parental covieing during childhood have a higher current weight status.*

In line with previous research, we assume that parents' media preferences and behaviors predict the media guidance activities they provide for their children (Livingstone, 2007; Nathanson, 2001; Notten & Kraaykamp, 2009a; Van der Voort, Nikken & Van Lil, 1992). So, we assume the effect of the parental television example partly runs via parental television guidance activities.

6.2.4 Indirect effects of parental television socialization, via what pathways?

When studying long-term effects of parental television socialization activities on a person's bodyweight, we may hardly expect direct effects. Our argument is that parents set an example and that children imitate their parents' viewing behaviors. We also hypothesize that the example the parents set predicts their media guidance activities, in turn affecting children's viewing behavior. This means that we more or less implicitly assume that the effect of parental media socialization activities on a person's current weight status runs at least partially via childhood television consumption.

We also recognize that the influence of parental television socialization activities and of childhood television consumption on a person's weight status in later life may run via different pathways. The current study focuses on the two most obvious potential mediators of the long-term effects of parents' television socialization: respondents' weight status in young adulthood and respondents' own adult characteristics, including television viewing and cognitive competency (i.e. educational attainment). Regarding the first, parental television socialization may have already impacted the respondents' bodyweight by young adulthood, possibly via childhood television viewing, which subsequently has a bearing on current weight status. With respect to the second, following prior research and previous findings in this study, we expect the parental television viewing example to affect respondents' current weight status via their cognitive competencies and their television viewing habits in adulthood. After all, a person's cognitive competency is significantly affected by parental media socialization, as extensively shown in the literature on cultural capital (De Graaf & De Graaf, 2002; Kloosterman et al., 2010; Notten & Kraaykamp, 2009b, 2010). It also appears to be a highly significant factor in predicting a person's television habits and bodyweight (Konig, Rebers & Westerik, 2009; Sund et al., 2010). We therefore include respondents' educational attainment and current television habits in our theoretical model as mediating factors. All in all, this study theorizes that, once socialization is completed, parental television socialization activities affect an individual's current weight status, and this effect may be mediated by childhood television consumption, young adult weight status, educational attainment and adult viewing habits.

6.3 Methodology

6.3.1 Data

To assess the effect of parental television socialization in childhood on current weight status, we make use of the Family Survey of the Dutch Population (FSDP) 2009 (Kraaykamp, Wolbers & Ruiters, 2009). The initial number of primary and secondary respondents in the 2009 FSDP is 2,969. The FSDP combines structured face-to-face and self-administrated written interviews, and is held among a nationally representative sample of the Dutch adult population. The FSDP holds information on several aspects of respondents' life course. This study uses the retrospective questions on in-home childhood (television) experiences and family background, as well as current information on respondents' individual characteristics, such as their educational level and television consumption. When longitudinal data is unavailable, a retrospective approach is commonly used to study the long-term effects of parental guidance on children's health (e.g. Brown et al., 2010; Harris & Bargh, 2009; Puhl & Schwarz, 2003). A well-known shortcoming of retrospective reports, however, is potential bias due to memory effects and the tendency to give socially desirable responses. Nonetheless, previous studies using the FSDP data show no significant bias due to systematic and random error in retrospective measures of parental media and cultural socialization (e.g. De Graaf, De Graaf & Kraaykamp, 2000; De Vries & De Graaf, 2008; Notten & Kraaykamp, 2010).

In the Netherlands television was introduced around 1955, meaning that for respondents born before 1955 questions about television-related socialization are not applicable. This also counts for respondents reporting that there was no television in the home during their childhood. We chose to remove these respondents from our sample (37.3% of the total). To study long-term effects, obviously the period of (parental) socialization has to be completed. Hence, we removed respondents living with one or both of their parents (0.2% of the total). Also, we selected respondents from age 25 (98.8% of the total) to be more sure that their educational careers were finished. Finally, respondents with current or pre-adult (severe) underweight ($BMI < 18.5$) (respectively, 1.1% and 11.1%) and severe obesity ($BMI \geq 40$) (respectively, 1.1% and 0.2%) are omitted from our analyses, because in these cases other explanatory mechanisms are expected to play a more dominant role (e.g. chronic disease, eating disorders). These are outside the focus of this study. The above-mentioned selections resulted in a final sample of 1,377 respondents.

6.3.2 Measurements

Respondents reported their weight and length, both at age 20 and at their current age. BMIs were then calculated (weight divided by height (kg/m^2)). The variable *respondents' current weight status* indicates respondents' BMI score at the time of interview (range 18.5–40). The variable *respondents' pre-adult weight status* reflects respondents' BMI score at age 20 (range 18.5–36). Prior research suggests that self-reported BMI may be underestimated (lower weight, higher length) (Gorber, Tremblay, Moher & Gorber, 2007; www.rivm.nl, 2011). In our study this implies a possible underestimation of the effects of parental media socialization on respondents' weight status. Consequently, our study constitutes a relatively strong test of the parental media socialization hypotheses.

All of the included parental television socialization measures refer to the time when the respondent was between ages 5 and 15. *Parental television example* measures the example set by the parents with respect to time spent viewing television. Respondents were asked to indicate how much time their parents watched television on a 4-point scale, ranging from (0) 'never' to (3) 'more than three hours a day'. We standardized this variable between 0 and 1 using a ranking procedure ($M=0.50$). We measured parental television guidance using nine items about parental television guidance in respondents' childhood (between 5 and 12 years old). Confirmatory factor analysis revealed that these indicators represent three conventional forms of parental television guidance: restrictive guidance, instructive guidance and covieing (Austin, 2001; Nathanson, 1999; Valkenburg et al., 1999). Three items refer to *parental restrictive television guidance*: (a) 'My parents limited the hours I was allowed to watch TV', (b) 'My parents decided what I could watch on TV' and (c) 'My parents had a specific TV timetable for the children' ($\alpha=0.77$). *Parental instructive television guidance* is measured by the following items: (a) 'My parents discussed with me why something seen on television was wrong', (b) 'In our family television programs were often discussed' and (c) 'My parents helped me understand what I saw on television' ($\alpha=0.79$). *Parental television covieing* is represented by (a) 'I often watched together with my parents a television show we both liked', (b) 'With my parents I could laugh about something on TV', (c) 'I often watched together with my parents television programs we were both interested in' ($\alpha=0.80$). Answers were given on a 4-point scale ranging from (0) 'entirely untrue' to (3) 'entirely true'. Scales were created taking average scores and were standardized between 0 and 1 employing a ranking procedure ($M=0.50$).

Respondents were asked to indicate how much they nowadays watched television on weekdays and weekend days, with both items ranging from (0) 'never' to (3) 'more than three hours a day'. A scale was constructed by taking the mean of the weekday score (multiplied by 5) and the weekend score (multiplied by 2), resulting in the variable *respondents' television viewing in adulthood*. Respondents were also asked to report how much they watched television at age 15. The variable *respondents' childhood television*

viewing ranges from (0) 'never' to (5) 'more than three hours a day'. By ranking, both variables on respondents' television viewing were standardized between 0 and 1 ($M=0.50$).

Respondents' educational level is represented by the educational attainment of the respondent in 10 categories. We applied a standard recoding procedure to obtain an interval scale using the minimum number of years essential 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 education (HBO) (15), university (WO) (17) and postgraduate (PhD) (21).

We control for parental social background, which refers to parental educational level and occupational status. *Parental educational level* is measured as the highest educational level of father or mother, represented by the number of years necessary to achieve the educational level concerned and ranging from 6 years (primary school) to 21 years (PhD). We constructed the variable *parental occupational status* by taking the maximum level of the father or mother according to the International Socio-Economic Index of Occupational Status (ISEI) (Ganzeboom, De Graaf & Treiman, 1992) at the time the respondent was aged 15.

This study takes into account respondents' family composition during childhood using three distinct measures. The FSDP holds information on whether the parents were divorced, and if so, in what year. We constructed the variable *parental divorce*, indicating whether parents were divorced in the respondent's formative years (ages 0–12), with categories (0) 'no parental divorce' and (1) 'parental divorce'. *Mother's age at childbirth* indicates the age of the mother in the respondent's birth year. To account for influential cases, we rounded exceptionally young mothers up to the age of 16 (12 cases), topping down unusually old mothers to the age of 45 (18 cases). To measure whether a respondent had a *working mother* two questions were used, namely (a) 'Was your mother employed for at least one year while you were in preschool?' and (b) 'Was your mother employed for at least one year while you were in primary school?'. We then constructed a variable indicating whether the mother was either (0) 'non-working' or (1) 'working during respondent's childhood'.

We also controlled for respondents' sex and birth year. *Respondents' sex* indicates the respondent being a (0) man or (1) woman. *Respondents' birth year* is a continuous variable ranging from 1955 to 1984. We replaced missing scores with mean values (4.7%). Our resulting dataset contains 1,377 individuals. Table 6.1 presents a detailed description of the variables.

Table 6.1 Descriptive statistics of all variables

	Minimum	Maximum	Mean	Std. Deviation
Respondents' characteristics				
Respondents' childhood television viewing	0.00	0.97	0.50	0.27
Respondents' pre-adult weight status	18.52	36.23	22.22	2.46
Respondents' educational attainment	6.00	21.00	12.91	2.98
Respondents' adult television viewing	0.00	0.94	0.50	0.29
Respondents' current weight status	18.56	39.77	25.78	3.73
Parental television socialization				
Parental television viewing example	0.00	0.91	0.50	0.27
Parental restrictive guidance	0.02	0.95	0.50	0.29
Parental instructive guidance	0.03	0.99	0.50	0.29
Parental television coviewing	0.00	0.92	0.50	0.29
Parental social background				
Parental educational level	6.00	21.00	11.09	3.24
Parental occupational status	24.00	86.00	48.04	14.61
Family composition				
Parental divorce (1=divorced)	0	1	0.06	
Mother's age at childbirth	16.00	45.00	28.46	5.57
Working mother (1=working)	0	1	0.36	
Control variables				
Respondents' birth year	1955.00	1984.00	1966.89	7.57
Respondents' sex (1=female)	0	1	0.51	

Source: FSDP 2009; N=1,377

6.3.3 Modeling strategy

To test our hypotheses about direct and indirect effects of parental television socialization, we applied path analyses through structural equation modeling (SEM) in Lisrel 8.8 (Jöreskog & Sörbom, 1996). A major advance of SEM is that it enables us to test the entire path model at once. We specified our structural equation model on the basis of our hypotheses and we included all exogenous and endogenous variables as observed variables. Although not shown in figure 6.1, we allowed for correlation between the errors of the different parental television guidance measures, as well as between the errors of respondents' pre-adult weight status, educational attainment and current television habits. In performing our final analysis we deleted non-significant

paths (β s) from the model. Figure 6.1 presents the results.³² The Root Mean Square Error of Approximation (RMSEA) (0.000) and Adjusted Goodness of Fit Index (AGFI) (0.992) of our final model indicate a good model fit. Appendix 6 shows bivariate correlations between all included endogenous variables.

6.4 Results

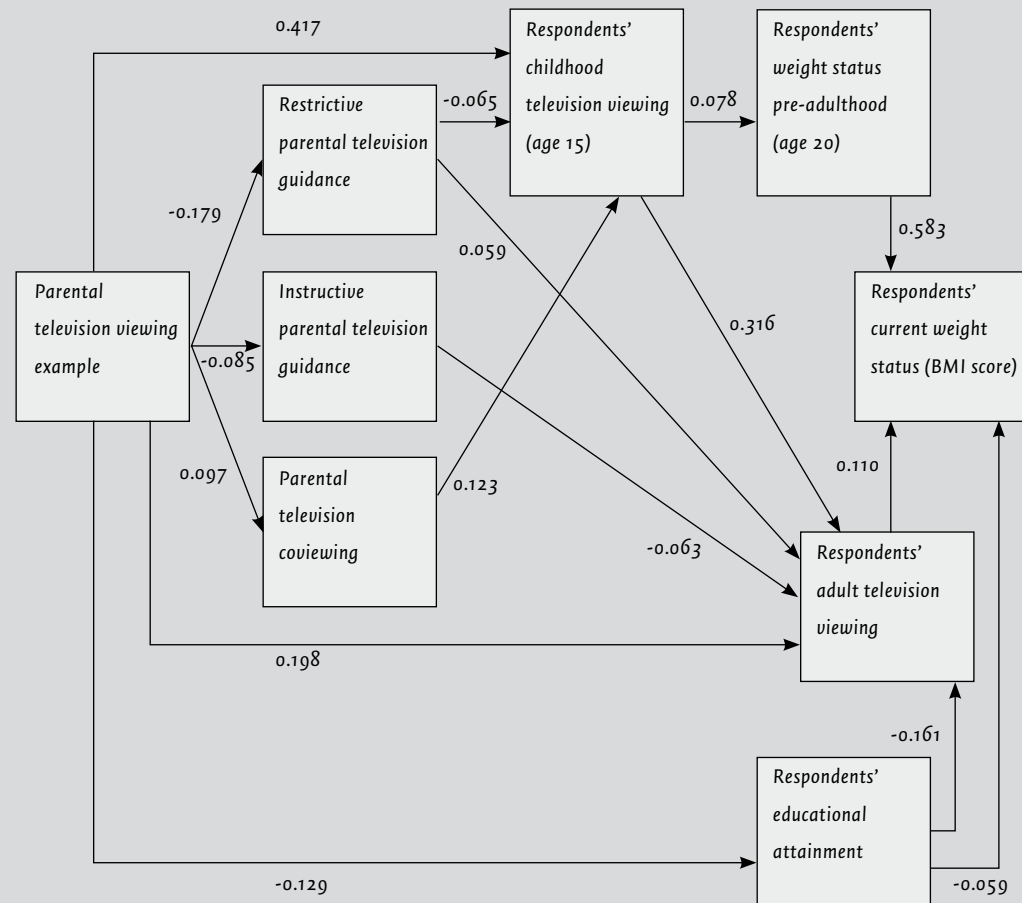
Figure 6.1 presents the significant direct (standardized) effects (β s) of our model estimating the effect of parental television socialization on a person's current weight status.³³ To begin with, our results clearly indicate that there are no direct effects of parental television example or television guidance on respondents' pre-adult and current weight status. But, as the paths in our model suggest, there are significant indirect effects (see also the total effects presented in Table 6.2). This means that parental television socialization does have a long lasting effect on children's weight status, but this effect is totally indirect and runs via different pathways. We therefore move on to describe the actual processes underlying parental television socialization, as well as the distinct mediators via which these socialization activities affect a person's current weight status.

First we take a closer look at the actual parental socialization process. As expected, and confirming the results in previous chapters of this study (see also Notten & Kraaykamp, 2009a; Notten, Kraaykamp & König, 2011), we find direct effects of the parental television example on parental television guidance activities. Our results show that a parental example of excessive television viewing has a negative effect on restrictive and instructive television guidance (resp. $\beta=-0.179$ and $\beta=-0.085$). These findings indicate that parents who are frequent television viewers themselves are less inclined to guide their children's television behavior in a restrictive (i.e. television rules) or instructive (e.g. discussion on TV content) manner. The parental example in television viewing positively relates to parental coviewing ($\beta=0.097$). Thus, parents who watch television on a frequent basis themselves, also regularly spend time together with their children in front of the television.

³² The structural equation model including all significant and non-significant paths revealed virtually the same results, except that the indirect effect of parental coviewing on current weight status appeared non-significant.

³³ Applying the same model on separate cohorts did not change our results. Also, controlling for parents' sports participation and unhealthy behaviors such as smoking and drinking alcohol during respondents' youth did not interfere with our findings.

Figure 6.1 Structural equation model of parental television socialization and weight status



Note: Coefficients are standardized significant ($p < 0.05$) direct effects (β s), non-significant direct effects (β s) are deleted.

Controlled for parental SES, family composition and respondents' sex and birth year (not presented)

Df=15; Chi-square= 9.779; RMSEA=0.000; AGFI=0.992

Next, we examine the effects of parental television socialization on respondents' childhood television behavior. Corroborating the imitation hypotheses, we find that children do tend to replicate their parents' television behavior, resulting in a positive direct effect of parental television viewing frequency on respondents' time spent watching television in childhood ($\beta=0.417$). Thus, parents who spend a considerable amount of time watching television foster their children to become frequent television viewers as well. Our results also reveal significant direct effects of parental television guidance on television consumption in childhood. There is a direct negative effect of restrictive parental media guidance on childhood television consumption ($\beta=-0.065$); that is to say, parental rules regarding television consumption result in less childhood television consumption. Parental covieing stimulates childhood television consumption ($\beta=0.123$). By simply watching television together (without commenting), parents guide their children to become frequent television viewers. Instructive parental guidance has no direct effect on television consumption in childhood.

Our structural equation model indicates that respondents' pre-adult weight status, their educational attainment and their adult television use are all relevant moderators of the effects of parental television socialization and childhood television consumption on a person's current bodyweight. To begin, we find that respondents' pre-adult weight status is directly and positively affected by childhood television viewing ($\beta=0.078$), which in turn affects a person's current weight status ($\beta=0.583$). This implies that a respondent's pre-adult weight status is affected by parental television socialization solely via the respondent's childhood television viewing. Apparently the effects of parental television socialization already manifest themselves during childhood. Hence, by stimulating or restricting childhood television viewing, parental television socialization affects their children's weight status in young adulthood, lasting into adulthood. Respondents' adult television viewing frequency positively affects their current weight status ($\beta=0.110$) and thereby functions as a relevant mediator of parental television socialization (both television example and guidance). Our results show a direct significant effect of the parental television example on adult television viewing ($\beta=0.198$), implying that the imitation notion seems to last into adulthood. Remarkable is our finding of a positive direct effect of parental television restrictions on adult television viewing ($\beta=0.059$). Perhaps here we do enter causality problems in that respondents who frequently watch television in adulthood report their parents as being more restrictive on their television behavior in childhood. Or, perhaps more likely, for children older than 15 (i.e. adolescents) restrictive parental television guidance might have a contradictory effect in that it stimulates adolescents to watch even more. Instructive parental guidance directly affects adult television consumption as well. Similar to previous research we find evidence that instructive parental guidance is more effective when children are older (e.g. Harris & Bargh, 2009). Foremost, and in line with chapter 5 (see also Notten, Kraaykamp & Konig, 2011), we here find that parents critically discussing television content with their children stimulate their offspring

to become more critical and modest television viewers, resulting in less time spent watching television in adulthood.

We also observe positive effects of childhood television consumption on adult television viewing ($\beta=0.316$), so television habits developed in childhood do seem to continue into adulthood. Corresponding to previous chapters of this study, we here find that a parental example of frequent television viewing in childhood negatively affects respondents' educational attainment ($\beta=-0.129$) (Notten & Kraaykamp, 2009b, 2010). In addition, by hampering a person's educational success, a parental example of frequent television viewing may stimulate more frequent television consumption as well as excess bodyweight in adulthood. Hence, our results clearly indicate indirect effects of parental television socialization on a person's current weight status via respondents' adult television viewing habits and their educational attainment.

Table 6.2 Total, direct, and indirect effects of parental television socialization on respondents' weight status, standardized effects (β s), Lisrel estimates (maximum likelihood)

	Respondents' weight status (BMI)		
	Total	Direct	Indirect
Independent variables			
Parental television viewing example	0.066 *		0.066 *
Parental restrictive guidance	0.001		0.001
Parental instructive guidance	-0.007 *		-0.007 *
Parental television coviewing	0.010 *		0.010 *
Respondents' childhood television viewing	0.080 *		0.080 *
Respondents' pre-adult weight status	0.583 *	0.583 *	
Respondents' educational attainment	-0.076 *	-0.059 *	-0.018 *
Respondents' adult television viewing	0.110 *	0.110 *	

Significance: * $p < 0.05$ Source: FSDP 2009; N=1,377 Df=15; Chi-square= 9.779; RMSEA=0.000; AGFI=0.992

Table 6.2 presents the direct, indirect and total effects. We expected the effects of parental television socialization on a person's current weight status to be (partly) mediated by childhood television viewing and to run via two distinct pathways: (a) via pre-adult weight status and (b) via individual characteristics of the respondents such as educational attainment and adult television viewing frequency. The total effects presented in Table 6.2 clearly support our theoretical notions and show that parental television socialization has a long-lasting (and totally indirect) effect on a person's weight status. Parents increase their children's odds of being overweight in adulthood by setting an example of frequent television viewing (total effect $\beta=0.066$) and by coviewing (total effect $\beta=0.010$). But as the total effects reveal, parents' instructive television guidance reduces the likelihood of their children suffering weight problems in the long run (total effect $\beta=-0.007$).

6.5 Conclusion and discussion

This chapter focused on the lasting effects of parental media socialization on a person's current weight status. Employing nationally representative data for the Dutch population, we performed structural equation modeling to analyze whether television habits in the childhood home predict a person's weight status in adulthood. To answer our research question, we analyzed direct and indirect effects of parental television socialization on a person's current weight status (measured by BMI score). Our main conclusion is that parental television example and television guidance activities have a lasting effect on children's weight status and the effects of these parental television socialization activities are entirely indirect. Parents' television example and the television guidance they offer affect a person's current weight status (a) via respondents' pre-adult weight status and (b) via respondents' educational attainment and television viewing frequency in adulthood. While a parental example of frequent television viewing and parental coviewing increases a child's odds of becoming overweight in adulthood, parental critical discussion of television content lowers children's risk of excess bodyweight in adulthood. Apparently, by fostering children to become modest and critical viewers, parents also guide their children into healthier lifestyles.

Unfortunately our data lacks some socialization factors found to be highly influential when it comes to weight problems, such as family meal frequency and availability of (healthy) home-cooked meals (e.g. Gable et al., 2007). We deal with these issues by controlling for family composition and parental socioeconomic status, which are well known to predict childhood nutrition conditions. Another potential drawback of our study may be our lack of information about parents' BMI during the respondents' childhood. Previous research, however, reveals that even if parents' bodyweight is taken into account, television effects still appear (Francis, Lee & Birch, 2003; Brown et al., 2010). A further point of discussion is that overweight persons (children) might watch more TV than normal-weight individuals, because they are overweight (Vandewater et al., 2004). Scrutinizing the causality of this relation is beyond the scope of the current study, but our analyses did take the correlation between these factors into account.

This study found several parental television socialization activities to be highly relevant in stimulating a person's (un)healthy weight status, even into adulthood. Parents increase the odds of their children becoming overweight or obese in adulthood just by setting an example of frequent television viewing or by frequently coviewing television programs with their children. By providing instructive television guidance, parents limit their children's risk of becoming overweight later in life. The findings of the current study indicate that in-home television viewing should not be viewed as just a way to spend leisure time; it has long-term (health) consequences too, continuing into the next generation. For policymakers and pediatricians, stimulating parents to reflect on their own television habits and encouraging them to stimulate children to become critical

television viewers might be useful tools for reducing children's health risks in the long run. This is especially relevant these days, as excess bodyweight is now a foremost health problem worldwide and (children's) media use seems to increase every day.

7 Conclusion and discussion

7.1 Introduction

The aim of this research was to achieve a better understanding of the causes and consequences of different in parental media socialization activities. In doing so, two research questions were central: (1) *To what extent do parental media socialization activities differ between families?* and (2) *To what extent do parental media socialization activities continue to affect children's (a) educational success, (b) media taste and (c) weight status in the long term?* The study proposed the intergenerational transmission of parents' media competencies, as a specific kind of parental cultural resources, to be an influential component of the transmission of social inequality. Pedagogical insights and media research were combined with cultural reproduction research to gain an improved understanding of (a) the actual processes and parental efforts underlying parental cultural and media socialization practices, (b) potential beneficial and detrimental long-term effects of media exposure and media communication in the family home and (c) the social differences herein between parental households (i.e. families).

This study contributes to existing theory and knowledge in several respects. First, it makes theoretical and empirical contributions to research on the reproduction of cultural resources by explicitly studying media aspects of parental cultural socialization. Second, this study clearly differentiates between parents' role as intentional and as unintentional educators. Third, both social status and cognitive aspects of media content and behaviors are acknowledged, resulting in a clear distinction between 'beneficial' and 'disadvantageous' media socialization practices. Fourth, this study primarily focused on long-term effects of parental media socialization on several terrains. Fifth, several advanced methodological techniques and different datasets were applied, resulting in statistically and methodologically sound insights into causes and lasting consequences of parental media socialization during childhood.

Table 7.1 Overview of research questions, data and methods

Chapter	Research questions	Data	Methods
Chapter 2	(1) To what extent do parents (a) from various social backgrounds and (b) with various family compositions differ in their media socialization activities? (2) To what extent do parental media preferences explain differences in parental media guidance activities?	FSDP 1998, 2000, 2003	OLS
Chapter 3	To what extent do parental media socialization activities affect children's educational attainment?	FSDP 1998, 2000, 2003	Multilevel linear regression
Chapter 4	(1) To what extent do parental media resources explain differences in children's science performance? (2) To what extent does a country's level of development affect the relation between parental media resources and children's science performance?	PISA 2006	Multilevel linear regression
Chapter 5	(1) To what extent do parental media socialization activities affect a person's current media taste? (2) Via what pathways do parental media socialization activities affect a person's current media taste?	FSDP 2003, 2009	Structural equation modeling
Chapter 6	(1) To what extent do parental television socialization activities affect a person's current weight status? (2) Via what pathways do parental television socialization activities affect a person's current weight status?	FSDP 2009	Structural equation modeling

Table 7.1 provides an overview of the research questions, datasets, and statistical methods used in each chapter. Chapter 2 focused on answering the first research question of this study, and established the extent of social differentiation in several parental reading and television socialization activities. The focus from chapter 3 onwards was on answering the second research question: probing the long-term effects of distinct parental media socialization activities on several terrains. The remainder of this chapter summarizes the study findings, providing an answer to the two main research questions before discussing limitations and directions for future research and policy.

7.2 Summary of the main results

The first empirical chapter (chapter 2) studied differentiation in parental media socialization, looking at parents' social background and family composition. Firstly, this chapter demonstrated a highly significant role of socioeconomic background in parental media socialization. Children from higher status families are privileged in terms of the quality and the quantity of parental media socialization activities. These children are more exposed to highbrow reading and television content, and less exposed to lowbrow television taste. Moreover, since all reading activities proved to be more common in high status families, this chapter's findings clearly underpin the socially valued status of reading. Parental media guidance, and especially reading guidance, also is positively and strongly influenced by parental social background. Secondly, family compositional factors were found to be important in the content and intensity of parental media socialization. Older mothers are more likely to have highbrow preferences and consume less lowbrow media. Generally, a bigger family size results in a lower intensity of parental media socialization in all domains. A parental divorce especially influences parent-child interactions on media use; in households with divorced parents media guidance is offered less frequently. Thirdly, findings in this chapter indicate that parents' own media preferences are a relevant predictor of the media guidance activities they undertake. Moreover, effects of parental social background on parental media guidance largely run via parents' own media preferences (i.e. the parental media example). High status parents are more inclined to guide their children's media competencies, apparently not just because they have the capacities to do so, but also because they value specific (highbrow) media content or behaviors themselves and want to transmit these preferences to their children.

Chapter 3 investigated long-term effects of highbrow and lowbrow parental media socialization, more specifically, media example and guidance, on a child's educational career. First, it was found that a parental example of excessive television viewing in childhood negatively affects a person's educational attainment. Next to television exposure time, the example parents set in their viewing content preferences is relevant: an example of lowbrow television viewing significantly reduces the educational success of children. Secondly, when it comes to parents' reading behavior, substantial positive effects were found of parents' reading frequency on a child's educational attainment. A parental example of highbrow reading in particular enhances a person's educational success. Thirdly, parent-child interaction on reading, that is, parental reading guidance, highly benefits a child's school success and significantly mediates the influence of the parental reading example. Parental television guidance activities during childhood do not appear to have meaningful lasting effects on a person's educational success. Overall, the findings in this chapter suggest that parental reading and television socialization may indeed be divided into highbrow and lowbrow activities, holding beneficial and disadvantageous effects for a child's educational success. Additionally,

the findings point out that cultural reproduction runs partly via distinct forms of parental media socialization.

Chapter 4 examined the effects of media resources in the parental home on the educational success of children, measured by children's science performance, from an international perspective. Results show that media provisions in the family home are meaningful for children's educational performance, as a beneficial resource but also as a disadvantage. A positive reading climate in the parental home, represented by the number of books in the home, and the availability of computers in the household benefit children's science performance. Although mere television access in the family home was found to have a positive effect, a television-rich home seems to hinder children's school success. Furthermore, we hypothesized that the effect of parental media resources on children's educational performance varies across countries, depending on the economic and cultural development of a nation. Results indicate that compared to less developed countries, in modern industrial societies parental reading investments are even more beneficial to their children's educational performance, whereas a television-rich parental home is even more disadvantageous. Overall, this chapter leads to the conclusion that the availability of media resources in the parental home is an important factor in children's school success. Furthermore, it was found that media resource availability mediates a significant part of the parental social status effects.

The first aim of chapter 5 was to gain an understanding of how an individual's media taste develops by analyzing the intergenerational transmission of television and reading preferences and integrating individual aspects (i.e. the lifestyle perspective) herein. Long-term effects were examined of the parental media example and the parental media guidance activities experienced during one's childhood on adult media tastes. The analyses demonstrated that both imitation and guidance play a major role in the intergenerational transmission of media taste. The findings above all showed that parents' media preferences and media guidance actions have a lasting effect on their (adult) children's highbrow and lowbrow reading and television tastes. The second purpose of this chapter was to explore the actual process underlying parental media socialization. By unraveling the direct and indirect effects of parental media socialization, imitation was found to be the main mechanism underlying parental media socialization. Parental media guidance, both direct and via its effect on children's school success, partly mediates effects of the parental media example and imitation processes, especially for reading.

Chapter 6 scrutinized the long-term effects of experienced parental television socialization on a person's current weight status (BMI). Results indicate that parental television socialization indeed is important in predicting whether a person will develop a weight problem in adulthood. Yet, as was expected, these socialization influences are entirely indirect. A parental example of frequent television viewing during childhood and regular parent-child coviewing indirectly increase current weight status through

two distinct pathways: via a respondent's weight status in young adulthood and via individual characteristics of the respondent such as educational attainment and own adult television habits. However, by providing instructive television guidance parents can limit their children's odds of becoming overweight in adulthood. Hence, by fostering their children to become modest and critical television viewers, parents also nurture their children to maintain a healthier lifestyle.

7.3 Main conclusions on parental media socialization

This thesis posed two central research questions. The first was to *what extent do parental media socialization activities differ between families?* This study pointed out that children from different families experience different levels of beneficial as well as disadvantageous parental media socialization, depending on the socioeconomic background of their parental home and family compositional characteristics. Moreover, parents' own media preferences direct the media guidance activities they undertake. High status parents provide more beneficial media socialization activities, because they have the competencies to do so, but also because they want to share their media preferences with their children.

The second central research question was to *what extent do parental media socialization activities continue to affect children's (a) educational success, (b) media taste and (c) weight status in the long term?* To answer this question, the current study scrutinized whether specific parental media socialization activities function as a resource or as a disadvantage in a child's development. The findings showed that parental media example, guidance and resources during one's childhood do affect a person's educational success, both within the national Dutch context and from an international perspective. Long term effects of parental media socialization on individual media tastes and weight status in adulthood were also examined. Overall, media socialization practices that represent socially valued and cognitively stimulating socialization, such as a literary climate in the family home and instructive parental television guidance, enhance a child's development and future well-being. A lowbrow in-home media climate, such as a parental preference for (excessive) popular television viewing, appears rather detrimental to children's development. Table 7.2 presents an overview of the beneficial and detrimental effects of parental media socialization found in this study.

Table 7.2 Overview of parental media socialization effects

Respondents' characteristics (in adulthood)	Educational success (Chapter 3 and 4)	Highbrow book reading/television taste (Chapter 5)	Lowbrow book reading/television taste (Chapter 5)	(Over) weight status (BMI) (Chapter 6)
Parental media example				
Parental reading time	+			
Parental television time	-			+
Parental highbrow book reading	+	+	+	
Parental lowbrow book reading	0	+	+	
Parental highbrow television viewing	0	+	-	
Parental lowbrow television viewing	-	-	+	
Parental media resources				
Literature-rich parental home	+			
Television-rich parental home	-			
Computer-rich parental home	+			
Parental media guidance				
Parental reading guidance	+	+	+	
Parental instructive television guidance		+	0	-
Parental restrictive television guidance	0	0	0	0
Parental television covieing		0	0	+

+ = positive effect; - = negative effect; 0 = non-significant effect

The current study successfully distinguished beneficial and disadvantageous long-term effects of parental media socialization on education, media consumption and weight status during a person's life course. All parental reading socialization activities emerged as a positive factor in a child's cognitive and cultural development. In contrast, parental television socialization activities may help and hinder a child's overall development, highly depending on the intensity and content of these parental practices. Furthermore, an initial exploration of continuing effects of parental computer-related socialization suggests positive effects. These findings lead us to conclude that research on the reproduction of social and cultural inequality would benefit from incorporating parental media socialization aspects as potentially independent sources of inequality.

7.4 Limitations of the current study

7.4.1 Theoretical model

This study proposed a causal or sequential theoretical model, with parents' media example preceding their media guidance activities. However, research points out that during the socialization period parents and children may influence each other (e.g. Grusec & Davidov, 2010). For instance, parents may strengthen their television rules or intensify their reading guidance if their children's school results deteriorate. Alternatively, parents may be stimulated by their children to watch certain television programs. It is also likely that as children grow older, the content and form of parental socialization activities will change. Parents may set effective television rules for a six-year-old child, but these same interventions are not likely to work for a 15-year-old adolescent. The data used throughout this study do not enable us to test such changes over time, as this would require a very innovative longitudinal design. However, respondents in this study reported average (as in most recurrent) experienced parental media socialization practices, and these are likely to be most influential in determining long-term effects of in-home media socialization.

The current study acknowledges that parental practices may change at certain points in a child's socialization period or formative years. Nevertheless, the theoretical model underlying this thesis represents a rather static fundamental concept of socialization, based on previous research indicating that parental values, tastes and basic norms concerning cultural activities are relatively stable and that they steer eventual parental guidance activities (Bourdieu, 1984; Darling & Steinberg, 1993; Hoover-Dempsey & Sandler, 1997; Lareau, 2003). This means that, although a child might experience parental modeling and guidance in varying intensities or time-orders, parents' initial decision to become involved in socialization efforts, as well as subsequent parent-child interactions in this regard, is based upon prior parental cultural tastes and role constructions.

7.4.2 Retrospective measurements

This study made use of retrospective data. Respondents reported on various aspects of their childhood and socialization experiences. A major advantage of retrospective data is that it allows long-term socialization effects to be studied; the FSDP data covers more than 50 years. Yet retrospective data is frequently said to be influenced by memory effects and social desirability bias. Previous research and additional analyses on respondents' reports of parental cultural capital using the FSDP data, however, show no significant biases due to random and systematic measurement error (e.g. De Graaf, De Graaf & Kraaykamp, 2000; De Graaf, Poortman & Ultee, 1996; De Vries & De Graaf, 2008; Kraaykamp & Van Eijck, 2010). This is corroborated by additional

calculations done in the course of this study based on both respondents' and parents' reports of parental reading during childhood. Nonetheless, this study acknowledges that the direct effect of the parental media example (i.e. direct imitation) may be slightly overestimated due to possible correlated error between respondents' own media behaviors and parental media consumption. Random error resulting in an underestimation of our results also may exist. This would reduce the chance of finding confirmation for our hypotheses. Hence, although several studies corroborate the absence of significant measurement error, this study remains cautious on this issue. Another possible drawback of the data employed is the problem of reversed causality. This may be especially relevant to the analyses based on the PISA data, in which parental socialization activities were reported by 15-year-old respondents who had not yet finished their socialization. Here home media access may be dependent on these students' school performance. However, in line with previous socialization research, this study claims that cultural preferences are relatively stable from young adulthood, before most people become a parent. Hence, parents' main stock of cultural and media assets in the family household will be quite stable during a person's socialization period. For computer access at home this may be more problematic, since at the time of data gathering (2005 and 2006), households with children were often also more likely to have computer access. Throughout this study the abovementioned data-related drawbacks are acknowledged by being cautious in formulating conclusions. Applying a panel design would likely shed additional light on possible causality issues.

7.4.3 Time, taste and preference

Unfortunately, not all of the employed datasets hold the same information on parental media socialization. Therefore, it was not possible to simultaneously test the impact of all three of the distinguished types of parental media socialization: parental media example, media guidance and media resources. Most chapters were able to test the relevance of parental media examples and guidance activities together. Internationally, the PISA data (only) enabled testing the impact of parental media resources, which could not be done with the FSDP data. Next, the variables or items used to measure media content preferences and behaviors actually include both content (i.e. preference or taste) and time (i.e. frequency) aspects. It was not possible to separate these two aspects; throughout the study measures of the parental media example regarding content refer to both preference or taste and to frequency. Thus, for reasons of collinearity and comparability, the current study did not include variables controlling for the actual time parents spent using media simultaneous with parents' media preferences. Future research might find ways to deal more adequately with this highly relevant but puzzling issue.

7.5 Suggestions for future research

This study encountered some highly interesting methodological and theoretical issues that were outside of the focus of the current research but might give way to new research in the future. Four of these are described here.

7.5.1 Parenting style and warmth

This research explicitly studied parents' contribution to their children's development by their role as educators. Yet, pedagogical and developmental research clearly points out that a safe and supporting family environment is a prerequisite for a child's successful development (Bandura & Walters, 1963; Bronfenbrenner, 1979, Gauvain, 2001; Snow et al., 1991). Indeed, a nurturing climate and values in the parental home are argued to be crucial for a child's development and well-being (e.g. Grusec & Davidov, 2010; Sharif & Sargent, 2006). Prior research has pointed out that the effectiveness of parental socialization depends on the strength of parent-child bonding, and more specifically, on the warmth and nurturing style in the family home (Baumrind, 1967; Bianchi & Robinson, 1997; Coleman 1988; Darling & Steinberg, 1993). It then might be expected that parental media socialization will be most effective in 'warm' family homes. On the other hand, in families where the parenting style may be labeled as neglectful, the potential disadvantageous effects of media socialization may be even more severe. In all of the analyses conducted throughout this study controls for family composition (i.e. structural family conditions) and parental social background were included, which turned out to be highly predictive factors for parents' nurturing style and in-home warmth in prior research. Yet future research taking into account actual measures for parenting style and parent-child bonding could provide deeper insight here.

7.5.2 Gender differences

Research in various areas, including the field of media studies, has shown different effects of parental socialization on boys and on girls as well as for fathers and mothers (e.g. Livingstone, 2002; McLeod & Brown, 1976; Roe, 1998). So, as may be expected, the current research also uncovered gender differences. For instance, chapter 2 showed that girls report more covieing with parents and more parental guidance in their reading behaviors than boys. One may also expect or hypothesize that parental media socialization activities and their effects differ between sons and daughters. For instance while girls are stimulated in beneficial (e.g. reading) behaviors, sons might experience more restrictive guidance, to limit their exposure to disadvantageous (e.g. aggressive digital) media. Also, girls could be more susceptible than boys to their parents' role modeling and instructions, which could result in differential lasting effects of media socialization. Although highly interesting, this issue is beyond the scope of the present

study. Here the focus was on the long-term effects of parental media socialization and the underlying reproduction process. However, future research might delve into this issue and seek greater insight into possible gendered effects of parental media socialization. In this respect, differentiating between fathers' and mothers' media socialization could be interesting too.

7.5.3 Media guidance and childhood media behaviors

Recommendations for future research can also be made regarding parent-child interaction on media use. Surprisingly, this study found only modest continuing effects of childhood parental television guidance. Since children spend a lot of time watching television, and parents' concerns about children's television viewing are (still) widespread, parental television guidance activities were expected to play a more pronounced role within the media socialization process. In this study possible relevant predictors of parental media socialization, like the time children actually spent using media, were unavailable. There was only limited information about respondents' own media behaviors during childhood. In the sixth chapter of this thesis we were able to include respondents' television viewing frequency during childhood, which contributed significantly to our models. Including respondents' childhood media behavior would likely provide additional insight into the actual media socialization process. Information on the exact age of the respondents in relation to the distinct parental media guidance activities could also increase our knowledge of socialization processes. Future research might include these aspects in their analyses.

7.5.4 Parental digital media socialization

As this study was being carried out, a large-scale shift was under way within media research and society, with attention on the whole shifting from television as the most dominant and most controversial media source to the internet and web 2.0. In modern societies (children's) use of digital media is increasing rapidly, as is the spread of all sorts of internet content. In the early days of internet diffusion and consumption, youngsters were found to have more internet skills than their parents (e.g. Lenhart, Madden & Hitlin, 2005). Recent research, however, indicates that parents have caught up with their children, and actually are now even more capable internet users than teenagers (De Haan, 2010; Van Deursen, Van Dijk & Peeters, 2011). The first studies on social differentiation in digital media use analyzed cleavages in access, then referred to as 'the digital divide'. Nowadays, following the 'diffusion of innovations perspective' (Rogers, 1995), research tends to focus on social differentiation in digital media preferences and competencies (DiMaggio et al., 2004; Van Dijk, 2006). As with television and reading, digital media skills have been found to be highly socially differentiated, and this differentiation is argued to be relevant to social success

and participation in modern society (Castells, 2001; Notten, Peter, Kraaykamp & Valkenburg, 2009). Moreover, research has shown that parental digital media guidance highly resembles their television guidance strategies (Livingstone et al., 2011; Livingstone & Helsper, 2008; Nikken & Jansz, 2006). In line with the findings of this study one may expect parental digital media socialization to be socially differentiated and to have both positive and negative long-term effects for a child's development and well-being.

This study may stimulate other scholars to further analyze the lasting effects of parental media socialization. As such, additional insights could be gained into possible enduring influences of parental socialization activities concerning beneficial and harmful aspects of digital media use. But the rise and spread of internet use and web 2.0 does not mean that the 'old media' have lost their significance. Firstly, in general people still spend a large part of their leisure time viewing television, an activity that starts at a younger age than digital media consumption (SKO, 2011; www.scp.nl, 2011; Council on Communications and Media, 2010). Secondly, and perhaps even more importantly, reading proficiency remains the most dominant skill requirement for a successful educational career and is a prerequisite for beneficial and effective internet use. Nowadays, media literacy programs are primarily aimed at awareness of opportunities and risks on the internet. Although this study definitely underpins the relevance and spread of these initiatives, it also urges efforts to increase knowledge of and investments in media education from a broader perspective. An example is the relevance of literary socialization practices in today's digital knowledge-based societies.

7.6 Policy implications

This study, first and foremost, underpins the relevance of media socialization and media literacy for a child's development and future social success. In the past decades, and as a consequence of the rapid spread of (digital) media, media literacy has become an important and recurrent issue on many cultural policy agendas. In our daily lives and in today's society, media use is inevitable and indispensable, and it will become even more so in the future. Hence, research on the causes and lasting consequences of different parental media socialization practices will certainly remain key. In order to develop policy that encourages parents and relevant others to guide children to become healthy media users, insight is needed into the effects of parental media socialization in the long term.

A number of policy implications follow from this study, two of them are mentioned here. Firstly, this study uncovered significant lasting effects of parental media socialization on children's development and well-being. Yet, it also showed that these socialization activities are not equally distributed among families but differ according to socioeconomic status and family composition. For instance, children from lower socioeconomic backgrounds and with divorced parents experience less instructive

television and reading guidance during childhood, which leads to less cultural competencies and lower educational success. Because parents differ significantly in their media preferences, media resources and the guidance activities they provide, other institutions might want to compensate for these inequalities. This could be deemed especially important since parental media socialization is not always beneficial but may in fact have lasting adverse effects on a child's well-being and development. Hence, it is recommended that greater attention be paid to these disparities in socialization and their enduring effects on a child's development, for instance, by (more) explicitly integrating media literacy within school curricula.

Secondly, for policymakers and pediatricians, stimulating parents to reflect on their own media habits and encouraging them to stimulate children to become modest and critical media users might be a useful tool for reducing children's health risks and stimulating cognitive as well as cultural competencies in the long run. Nonetheless, since parental socialization starts at a child's birth, possible inequalities will already be present at an early age. Therefore, to create equal opportunities, policymakers could consider prioritizing media education in preschool programs and institutions, for instance, at daycare centers and in kindergartens, and involve parents in these programs.

To conclude, parental media socialization is socially differentiated and, moreover, it entails lasting beneficial and disadvantageous effects for a child's social success and well-being. It is up to governments, policymakers, parents, pediatricians and researchers to put these findings to use, for instance, in the form of child development programs and family policy.

Summary in Dutch (samenvatting)

Ouders en de media: oorzaken en gevolgen van ouderlijke mediasocialisatie.

Inleiding

De media zijn niet meer weg te denken uit onze moderne samenleving. Ook kinderen zijn fervente mediagebruikers en brengen een aanzienlijke hoeveelheid tijd door met televisiekijken, computer- en internetgebruik en lezen. Bij het aanleren van mediavaardigheden en het stimuleren van 'gezond' mediagebruik bij kinderen spelen de ouders een belangrijke rol. Inzicht in de verschillen in en langetermijneffecten van ouderlijke mediasocialisatie of mediaopvoeding is daarom van belang. In dit boek wordt verondersteld dat ouderlijke mediasocialisatie, ofwel de intergenerationele overdracht van ouderlijke mediavaardigheden en preferenties, een belangrijke factor is in de overdracht van sociale ongelijkheid. Pedagogische studies en inzichten vanuit mediaonderzoek worden gecombineerd met sociologisch cultureel reproductieonderzoek om meer inzicht te verkrijgen in (a) verschillen in ouderlijke mediasocialisatie tussen gezinnen met verschillende sociaaleconomische en sociaaldemografische kenmerken (b) het daadwerkelijke proces dat ten grondslag ligt aan ouderlijke mediasocialisatie en de concrete inspanningen die ouders in dit kader verrichten, en (c) de mogelijke gunstige en nadelige langetermijneffecten van mediasocialisatie in het ouderlijk gezin voor de ontwikkeling van een kind.

Dit onderzoek heeft als doel een bijdrage te leveren aan bestaande theorieën en kennis rondom ouderlijke mediasocialisatie, op een aantal innovatieve wijzen. Door specifiek de mediagerelateerde aspecten van de ouderlijke culturele socialisatie te bestuderen worden mediavorkeuren en mediaconsumptie geïntegreerd in het culturele reproductieonderzoek. Op deze wijze wordt vanuit een multidisciplinair perspectief gepoogd meer inzicht te verkrijgen in processen, causale factoren en gevolgen van ouderlijke culturele- en mediasocialisatie. Daarnaast wordt in dit onderzoek een onderscheid gemaakt tussen bewuste en onbewuste ouderlijke socialisatieactiviteiten (i.e. opvoedingspraktijken). Om beter te begrijpen hoe de intergenerationele overdracht van mediacompetenties daadwerkelijk plaatsvindt, worden drie verschillende vormen van ouderlijke mediasocialisatie onderscheiden en bestudeerd: het voorbeeld dat ouders geven door middel van hun eigen mediaconsumptie (ouderlijk mediavorbeeld), de begeleiding die ouders hun kinderen bieden bij het mediagebruik (ouderlijke mediabegeleiding) en beschikbaarheid van of toegang tot media in het ouderlijk huis (ouderlijke mediabronnen). Bovendien worden causale verbanden verondersteld tussen deze verschillende vormen van ouderlijke mediasocialisatie: de ouderlijke mediavorkeuren vormen in dit onderzoek het startpunt van het mediasocialisatieproces.

Een belangrijk aspect van dit onderzoek is dat verschillen in sociale waardering en cognitieve stimulans worden onderscheiden van zowel mediabron als media-inhoud.

Dit onderzoek stelt dat ouderlijke 'highbrow' ofwel 'serieuze' mediagebruiken, zoals het lezen van hoogwaardige literatuur, bijdragen aan het sociale succes en de culturele competenties van kinderen. Een ouderlijk 'lowbrow' ofwel 'populaire' mediaopvoeding, zoals veel televisiekijken of het lezen van romantische lectuur, zou mogelijke negatieve gevolgen hebben voor het welzijn en de ontwikkeling van een kind. Kortom, binnen het concept culturele hulpbronnen maakt dit onderzoek een onderscheid tussen 'gunstige' en 'nadelige' culturele (i.e. media) hulpbronnen en opvoedingsactiviteiten. Tot slot kenmerkt dit onderzoek zich door de focus op de langetermijneffecten van ouderlijke mediasocialisatie. Voorgaand onderzoek naar mediaopvoeding richt zich veelal op kinderen die nog thuis wonen ofwel op effecten op de korte termijn. Dit onderzoek heeft echter als doel meer inzicht te verschaffen in de langetermijneffecten van ouderlijke mediaopvoeding op diverse terreinen.

Twee onderzoeksvragen staan centraal in deze studie. De eerste onderzoeksvraag luidt: *in welke mate verschilt ouderlijke mediasocialisatie tussen gezinnen?* De tweede onderzoeksvraag luidt als volgt: *in welke mate beïnvloedt ouderlijke mediasocialisatie het onderwijssucces, de mediasmaak en het (over)gewicht van kinderen op de lange termijn?* In hoofdstuk 2 wordt de eerste onderzoeksvraag van dit onderzoek beantwoord door de mate van sociale differentiatie vast te stellen voor verschillende ouderlijke lees- en televisie socialisatieactiviteiten. Vanaf hoofdstuk 3 staat de tweede onderzoeksvraag centraal en worden langetermijneffecten van verschillende vormen van ouderlijke mediasocialisatie onderzocht.

Hoofdstuk 2

Sociale differentiatie in ouderlijke mediasocialisatie

In het eerste empirische hoofdstuk wordt gekeken in hoeverre ouderlijke mediasocialisatie verschilt tussen gezinnen. Voorgaand onderzoek heeft uitgewezen dat gezinskenmerken van belang zijn voor zowel de culturele leefstijl (i.e. mediaconsumptie) van ouders als de intensiteit en inhoud van de opvoedingsactiviteiten die zij ondernemen. In dit hoofdstuk wordt daarom bestudeerd in hoeverre ouderlijke sociaaleconomische en sociaaldemografische kenmerken van invloed zijn op de mediagewoonten of mediasocialisatie in het ouderlijk gezin. Hypothesen worden getoetst door middel van multivariate regressieanalyse gebruikmakend van gegevens afkomstig van de Familie-enquête Nederlandse Bevolking 1998, 2000, 2003. De resultaten laten allereerst duidelijk zien dat de sociaaleconomische achtergrondkenmerken van ouders, zoals opleidingsniveau en beroepsstatus, een significante rol spelen bij de mediaopvoeding die zij hun kinderen bieden. Kinderen uit hogere sociale milieus zijn zowel wat betreft kwaliteit als kwantiteit bevoordeeld in de mediaopvoeding die zij thuis ervaren. Deze kinderen ervaren thuis vaker een serieus ofwel gunstig ouderlijk mediavoorbeeld doordat hun

ouders serieuze literatuur en televisieprogramma's de voorkeur geven boven populaire televisie-inhoud. Ouderlijke mediabegeleiding, en vooral de leesbegeleiding die ouders bieden, komt ook meer voor in gezinnen met een hogere sociale status dan in gezinnen gekenmerkt door een lagere sociaaleconomische achtergrond. De sociaal gewaardeerde status van lezen wordt in dit onderzoek bevestigd doordat alle leesactiviteiten vaker voorkomen in gezinnen met een hogere sociale status.

De sociaaldemografische kenmerken van het ouderlijk gezin blijken ook belangrijk te zijn voor zowel de inhoud als de intensiteit van ouderlijke mediaopvoeding. Oudere moeders hebben vaker een voorkeur voor serieuze media, gebruiken minder populaire media en geven daardoor een gunstiger mediavoorbeeld dan jongere moeders. Kinderen uit grotere gezinnen moeten de aandacht van hun ouders delen, hetgeen resulteert in minder individueel ervaren mediaopvoeding. Een echtscheiding heeft vooral invloed op de ouder-kind interactie rondom mediagebruik; in huishoudens met gescheiden ouders wordt mediabegeleiding minder vaak aangeboden. Kinderen met gescheiden ouders worden daardoor niet alleen minder toegerust met gunstige mediavaardigheden, zij worden ook minder beschermd tegen de negatieve aspecten van mediaconsumptie.

Een derde belangrijke bevinding in dit hoofdstuk is dat de mediavorkeuren van ouders een belangrijke voorspeller zijn van de mate en vorm van mediabegeleiding die zij hun kinderen bieden. Bovendien verloopt de invloed van de ouderlijke sociale status op mediabegeleiding voor een groot deel via de mediavorkeuren van de ouders (i.e. het ouderlijk mediavoorbeeld). Hoger opgeleide ouders begeleiden vaker het mediagebruik van hun kinderen, niet alleen omdat zij de capaciteiten hebben om dit te doen, ook omdat zij bepaalde (serieuze) media-inhoud en mediavorkeuren waarderen en deze preferenties willen overdragen op hun eigen kinderen. Het tegengestelde proces vinden we voor lager opgeleide ouders; met name hun voorkeur voor populaire televisieprogramma's resulteert in minder gunstige mediabegeleiding. De algemene conclusie van dit hoofdstuk luidt dat ouderlijke mediasocialisatie sterk sociaal gedifferentieerd is.

Hoofdstuk 3

Ouderlijke mediasocialisatie en onderwijssucces; hulpbron of restrictie?

Het doel van hoofdstuk drie was meer inzicht te verkrijgen in de invloed van ouderlijke mediasocialisatie op het onderwijssucces van een kind. Mediagebruik heeft een centrale plek binnen het ouderlijk gezin en voorgaand onderzoek heeft zowel positieve als negatieve effecten aangetoond van mediagebruik op de cognitieve competenties van kinderen. Echter, er is maar weinig onderzoek naar de langetermijneffecten van ouderlijke mediasocialisatie op de onderwijs carrière van een kind. Voortbouwend op cultureel reproductieonderzoek formuleren we in dit hoofdstuk hypothesen over de

invloed van zowel de intensiteit als inhoud van het ouderlijk mediavoorbeeld en de ouderlijke mediabegeleiding op het uiteindelijke behaalde opleidingsniveau van een persoon. Uitgangspunt daarbij is dat ouderlijke mediasocialisatie zowel een hulpbron als restrictie kan zijn in de schoolloopbaan van een kind. We veronderstellen dat mediasocialisatie een gunstige hulpbron kan zijn omdat het de culturele competenties en cognitieve ontwikkeling van een kind stimuleert en het inwijdt in de schoolcultuur. Maar ouderlijke mediasocialisatie kan ook een restrictie zijn in de onderwijs carrière van een kind, bijvoorbeeld wanneer de mediaopvoeding gekenmerkt wordt door populaire of laagdrempelige media-inhoud en weinig cognitieve stimulans. In dit hoofdstuk wordt ouderlijke lees- en televisieopvoeding bestudeerd, waarbij een onderscheid gemaakt wordt tussen serieuze en populaire socialisatieactiviteiten op beide terreinen. Ook wordt een duidelijk onderscheid gemaakt tussen het voorbeeld dat ouders geven en de begeleiding die zij bieden, en wordt de veronderstelde causale relatie tussen beiden onderzocht in relatie tot het onderwijssucces van een persoon. We toetsen onze hypothesen door middel van multiniveau-analyse en maken gebruik van gegevens afkomstig van de Familie-enquête Nederlandse Bevolking 1998, 2000, 2003.

De resultaten leiden tot twee belangrijke conclusies. Allereerst vinden we dat een ouderlijk voorbeeld van veel televisiekijken in de kindertijd een negatief effect heeft op het onderwijssucces van een persoon. Naast de tijd die ouders besteden aan televisiekijken is ook de inhoud van de programma's die zij kijken van belang: ouders die veel naar populaire tv-programma's kijken beperken met dit voorbeeld de schoolloopbaan van hun kinderen. De tv-begeleiding die ouders bieden lijkt op de lange termijn geen significante invloed uit te oefenen. Ten tweede vinden we substantiële langetermijneffecten van ouderlijke leesopvoeding op het onderwijssucces van een kind. Hoewel een ouderlijk voorbeeld van lezen en een voorkeur voor serieuze literatuur het schoolsucces van een kind bevordert, is het vooral de ouderlijke leesbegeleiding die een belangrijke impuls geeft aan de schoolloopbaan van kinderen. In het algemeen laten de resultaten van dit hoofdstuk zien dat ouderlijke lees- en televisiesocialisatie inderdaad bestaat uit serieuze en populaire activiteiten, die een langdurige positieve en negatieve invloed kunnen uitoefenen op het onderwijssucces van een kind. Ook laat dit hoofdstuk zien dat culturele reproductie deels verloopt via verschillende vormen van ouderlijk mediasocialisatie.

Hoofdstuk 4

Media-aanbod in het ouderlijk huis en onderwijssucces vanuit een internationaal perspectief

Het vierde hoofdstuk van dit proefschrift bestudeert vanuit een internationaal vergelijkend perspectief de invloed van het media-aanbod in het ouderlijk huis op het onderwijssucces van kinderen. Hoewel Bourdieu's culturele reproductietheorie en het belang van ouderlijke culturele socialisatie is getoetst in verschillende landen,

is er nog weinig internationaal vergelijkend onderzoek verricht naar het belang van ouderlijke mediasocialisatie voor de schoolloopbaan van een persoon. Informatie van ouders en kinderen uit 53 landen afkomstig van het 'Programme for International Student Assessment (PISA) 2006' wordt gebruikt om te bestuderen in welke mate de aanwezigheid van diverse mediabronnen in het ouderlijk huis, een indicatie van het mediaklimaat in het ouderlijk gezin, een positieve dan wel negatieve invloed uitoefent op het schoolsucces van kinderen. Bovendien verwachten we dat deze relatie beïnvloed wordt door de mate van ontwikkeling of modernisering van een land. Hypothesen over voor- en nadelen van het aantal boeken, tv's en computers in het ouderlijk huis voor de onderwijsprestaties van kinderen zijn getoetst. Daarnaast wordt in dit hoofdstuk bestudeerd in hoeverre deze effecten sterker worden of juist afnemen naar gelang het welvaarts- en algemene opleidingsniveau van een land.

De resultaten van multiniveau-analyse laten zien dat een positief leesklimaat in het ouderlijk huis en de beschikbaarheid van thuiscomputers gunstig is voor de onderwijsprestaties van kinderen. En hoewel één tv in het ouderlijk huis bijdraagt aan het schoolsucces van een kind, neemt dit positieve effect bij ieder additioneel tv-toestel af, om uiteindelijk te resulteren in een negatief effect. Wereldwijd lijkt de afwezigheid van een televisietoestel in het ouderlijk huis het wereldbeeld en de kennis van een kind te beperken. Echter, naast dit initiële positieve effect blijkt de lage sociale status en beperkte cognitieve prikkeling die samengaan met televisiekijken in conflict te zijn met de heersende schoolcultuur. De resultaten laten ook zien dat de helft van het effect van de ouderlijke sociale status verloopt via de mediabronnen, waarmee ook vanuit een internationaal perspectief enige bevestiging wordt gevonden voor Bourdieu's reproductietheorie.

We verwachtten dat het effect van ouderlijke mediabronnen zou variëren tussen landen. Uit de bevindingen in dit hoofdstuk blijkt dat, in vergelijking met minder gemoderniseerde samenlevingen, een literair thuisklimaat gunstiger is voor de onderwijsprestaties van een kind in landen met een hoger niveau van culturele en economische ontwikkeling. Boeken, vaak aangeduid met de term 'oude media', zijn van groot belang in de moderne digitale samenleving. Verder tonen de resultaten aan dat naarmate een samenleving moderner wordt, het negatieve effect van een sterk televisiegeoriënteerd ouderlijk gezin op het schoolsucces van een kind toeneemt. Het gunstige effect van een thuiscomputer blijft stabiel, ongeacht het ontwikkelingsniveau van een land. Dit hoofdstuk toont in de eerste plaats aan dat het media-aanbod in het ouderlijk huis een belangrijke factor is in de onderwijs carrière van kinderen, daarnaast laat het zien dat het belang van ouderlijke lees- en televisiesocialisatie toeneemt naarmate een land een hoger niveau van modernisering bereikt.

Hoofdstuk 5

Media in het ouderlijk gezin: de intergenerationale overdracht van mediasmaak

Het eerste doel van dit hoofdstuk was meer inzicht te verkrijgen in de ontwikkeling van individuele mediavorkeuren, door het bestuderen van langetermijneffecten van ouderlijke mediasocialisatie en daarbij rekeninghoudend met individuele aspecten kenmerkend voor leefstijlonderzoek (e.g. culturele competenties). We hebben ons expliciet gericht op zowel het serieuze als populaire lees- en televisievoorbeeld dat ouders geven, verschillende vormen van ouderlijke mediabegeleiding alsook het opleidingsniveau van een persoon. Hoewel voorgaand onderzoek het belang heeft aangetoond van de opvoeding in het ouderlijk gezin voor de ontwikkeling van culturele- en mediavorkeuren, is er weinig bekend over hoe mediasmaak wordt overgedragen van de ene generatie op de andere. Het tweede doel van dit onderzoek was dan ook het blootleggen van het onderliggende proces van intergenerationele overdracht van mediavorkeuren. De veronderstelling was dat individuele mediavorkeuren zich vormen door imitatie van het ouderlijk mediavorbeeld gedurende de jeugd, maar dat dit imitatieproces ook indirect kan verlopen, via de ouderlijke mediabegeleiding en eigen schoolprestaties. We bestuderen daarom verschillende wijzen waarop ouders de mediavorkeuren van hun kinderen kunnen beïnvloeden: via het voorbeeld dat ouders geven, door de mediabegeleiding die zij hun kinderen bieden, en via de invloed van ouders op de cognitieve competenties van hun kinderen.

Om de intergenerationele overdracht van ouderlijke lees- en televisievoorkeuren te bestuderen hebben we gebruik gemaakt van informatie uit de kindertijd en van de huidige kenmerken van 2539 respondenten, ondervraagd in 2003 en 2009 (De Graaf e.a., 2003; Kraaykamp e.a., 2009). Door het toepassen van structural-equationmodellen bestuderen we ouderlijke mediasocialisatieprocessen en de ontwikkeling van individuele serieuze en populaire mediavorkeuren. Allereerst vinden we significante langetermijneffecten van het voorbeeld dat ouders geven en de mediabegeleiding die zij hun kinderen bieden voor zowel serieuze als populaire mediavorkeuren. Ouders geven een bepaald lees- of televisievoorbeeld, kinderen imiteren hun ouders' mediavorkeuren en gedrag, en dit socialisatie-effect blijft bestaan gedurende de verdere levensloop van deze kinderen. Ouder-kind interactie rondom mediagebruik is een ander belangrijk aspect in de intergenerationele overdracht van mediasmaak. Ouders die de leesvaardigheden van hun kinderen begeleiden, stimuleren hiermee blijvend het leesplezier van hun kinderen, wat blijkt uit het meer lezen van zowel populaire als serieuze literatuur in volwassenheid. Een instructieve of educatieve ouderlijke televisieopvoeding in de kindertijd, zoals het bediscussieren van tv-programma's, heeft een permanente stimulerende invloed op het kijken naar serieuze tv-programma's. Een tweede belangrijke conclusie is dat de intergenerationele overdracht van lees- en televisievoorkeuren voornamelijk lijkt plaats te vinden door imitatie. Een deel van dit rolmodel of imitatie-effect verloopt via de ouderlijke

mediabegeleiding en het opleidingsniveau van een persoon. Dit hoofdstuk toont bovenal aan dat de ouderlijke mediasocialisatie ervaren tijdens de kindertijd blijvende gevolgen heeft voor de lees- en televisievoorkeuren van een persoon.

Hoofdstuk 6

Ouders, televisie en lichaamsgewicht (BMI)

Centraal in dit hoofdstuk staan de langetermijneffecten van ouderlijke televisiesocialisatie op het huidige lichaamsgewicht (BMI) van een persoon. Wetenschappers vanuit diverse disciplines zijn het erover eens dat televisiekijken via verschillende mechanismen kan leiden tot een ongezond (te hoog) gewicht; vooral het 'overeten' tijdens het tv-kijken en de invloed van reclames op het ontwikkelen van een voorkeur voor vet en suikerrijk voedsel zou de relatie tussen televisiekijken en (over)gewicht verklaren. Door het toepassen van structural-equationmodellen hebben we bestudeerd in hoeverre ouderlijke televisiesocialisatie ervaren gedurende de jeugd direct en indirect het huidige lichaamsgewicht van een persoon beïnvloedt. We maken hierbij gebruik van gegevens afkomstig van de Familie-enquête Nederlandse Bevolking 2009. Dit hoofdstuk toont aan dat verschillende aspecten van ouderlijke tv-socialisatie relevant zijn voor de ontwikkeling van een (on)gezond lichaamsgewicht van kinderen, ook op de lange termijn. Ouders vergroten de kans dat hun kinderen overgewicht of obesitas ontwikkelen in volwassenheid door in hun rolmodel functie een voorkeur voor veel tv-kijken te benadrukken of door veelvuldig samen met hun kinderen televisie te kijken. Door een instructieve tv-begeleiding kunnen ouders enigermate verhinderen dat hun kinderen op de lange termijn een ongezond (hoog) gewicht ontwikkelen. Kortom, zowel het ouderlijke tv-voorbeeld (via imitatie) als de tv-begeleiding (ouder-kind interactie) gedurende de jeugd jaren van een persoon zijn van belang bij het voorspellen van (over)gewichtproblemen in volwassenheid. De gevonden effecten van ouderlijke televisiesocialisatie zijn echter volkomen indirect. Het ouderlijk tv-voorbeeld en de ouderlijke tv-begeleiding gedurende de jeugd zijn van invloed op het volwassen (huidige) lichaamsgewicht van een persoon, via kijkgewoonten in de kindertijd en (a) via het lichaamsgewicht van deze persoon in jongvolwassenheid of (b) via diens opleidingsniveau en kijkfrequentie in volwassenheid. Terwijl een ouderlijk voorbeeld van veel tv-kijken en het vaak samen tv-kijken met hun kinderen op de lange termijn de kans op overgewicht voor deze kinderen vergroot, heeft de instructieve tv-begeleiding van ouders gedurende de jeugd juist een remmende werking op het ontwikkelen van een (te) hoog lichaamsgewicht. Blijkbaar draagt het opvoeden van kinderen tot kritische en gematigde televisiekijkers ook bij aan het ontwikkelen van een gezonde leefstijl. De resultaten van dit hoofdstuk laten zien dat televisiekijken in het ouderlijk gezin niet enkel een manier is om de vrije tijd te besteden; het heeft ook significante gezondheidseffecten, zelfs tot in de volgende generatie.

Hoofdstuk 7

Conclusie en discussie

Belangrijkste conclusies

In hoofdstuk 7 worden de belangrijkste conclusies van het onderzoek besproken en wordt antwoord gegeven op de twee centrale onderzoeksvragen. Ten eerste laat dit onderzoek zien dat kinderen verschillen in ouderlijke mediasocialisatie ervaren, en dat deze verschillen sterk afhankelijk zijn van de sociaaleconomische en sociaaldemografische kenmerken van het ouderlijk gezin. Bovendien blijken de mediavorkeuren van ouders belangrijke voorspellers te zijn van de mediabegeleiding die zij hun kinderen bieden. Zo bieden ouders uit de hogere sociaaleconomische milieus hun kinderen een serieuze of gunstige mediaopvoeding omdat zij over de capaciteiten beschikken om deze socialisatieactiviteiten te ondernemen, maar ook omdat zij hun eigen mediavorkeuren willen doorgeven aan hun kinderen. Het tweede deel van dit onderzoek toont aan dat ouderlijke mediasocialisatie een belangrijke gunstige hulpbron maar ook een restrictie kan zijn in het ontwikkelingsproces van een kind. De resultaten laten significante langetermijneffecten zien van het ouderlijk mediavorbeeld, de ouderlijke mediabegeleiding en het media-aanbod gedurende de kindertijd op het onderwijssucces van een persoon, zowel vanuit een Nederlands als internationaal perspectief. De ouderlijke mediasocialisatie blijkt ook langdurig van invloed op de mediavorkeuren en het lichaamsgewicht van kinderen. In het algemeen hebben sociaal gewaardeerde en cognitief stimulerende ouderlijke mediasocialisatie activiteiten, zoals een literair thuis klimaat en educatieve tv-begeleiding, een positieve en stimulerende invloed op de ontwikkeling van culturele competenties en het welzijn van kinderen. Een laagdrempelig of populair mediaklimaat in het ouderlijk huis, zoals een voorkeur voor veel tv-kijken, oefent een negatieve invloed uit op de ontwikkeling en gezondheid van een kind.

Dit onderzoek laat zien dat alle vormen van ouderlijke leessocialisatie een langdurige positieve invloed uitoefenen op de cognitieve en culturele ontwikkeling van een kind. Echter, ouderlijke tv-opvoeding kan de ontwikkeling en het welzijn van kinderen op de lange termijn zowel stimuleren als belemmeren, afhankelijk van de intensiteit en inhoud van de geboden televisiesocialisatie. Een eerste verkenning van mogelijke langetermijneffecten van een ouderlijke digitale mediasocialisatie laat positieve resultaten zien. Deze bevindingen leiden tot de conclusie dat rekening houden met ouderlijke mediasocialisatie belangrijke inzichten kan opleveren in onderzoek naar culturele reproductie en sociale ongelijkheid.

Verbeteringen en beperkingen

Dit onderzoek heeft op diverse terreinen vooruitgang geboekt in vergelijking met voorgaand onderzoek. Zo vormt het huidige onderzoek een aanvulling op het bestaande culturele reproductieonderzoek door de specifieke focus op mediagebruik. Daarnaast wordt een onderscheid gemaakt tussen onbewuste en bewuste socialisatieactiviteiten. Ook erkent dit onderzoek zowel status als cognitieve of culturele componenten van mediagebruik en de positieve dan wel negatieve langetermijneffecten hiervan. Echter, naast relevante verbeteringen kent dit onderzoek uiteraard ook verschillende beperkingen.

Een eerste beperking betreft het statische karakter van het conceptuele causale model dat ten grondslag ligt aan dit onderzoek en dat veronderstelt dat de mediavorkeuren van ouders voorafgaan aan en bepalend zijn voor de inhoud en intensiteit van de mediabegeleiding die zij hun kinderen bieden. Dit onderzoek veronderstelt dat de culturele waarden en preferenties van ouders stabiel zijn (vanaf jongvolwassenheid), en de basis vormen waarop deze ouders besluiten al dan niet actief de culturele gedragingen en voorkeuren van hun kind te gaan begeleiden. Desondanks is het aannemelijk dat gedurende de socialisatieperiode op bepaalde momenten causaal veronderstelde relaties wederkerig zijn of in intensiteit variëren. Bijvoorbeeld, wanneer een kind slechter presteert op school zullen ouders mogelijk de tv-regels aanscherpen of het leesgedrag van hun kinderen intensiever gaan stimuleren.

Een andere beperking in dit onderzoek betreft het gebruik van retrospectieve gegevens, waarvan vaak verondersteld wordt dat zij mogelijk meetfouten bevatten door herinneringseffecten. Voorgaand onderzoek naar ouderlijke culturele socialisatie op basis van dezelfde data (Familie-enquête Nederlandse Bevolking) heeft echter aangetoond dat er vrijwel geen sprake is van vertekening door systematische en toevallige fouten (e.g. De Graaf, De Graaf & Kraaykamp; De Vries & De Graaf, 2008; Kraaykamp & Van Eijck, 2010). Eigen berekeningen bevestigen deze bevindingen. Dit neemt niet weg dat herinneringseffecten mogelijk kunnen resulteren in een lichte overschatting van het directe imitatie-effect in dit onderzoek. Eventuele toevallige fouten zouden kunnen resulteren in een onderschatting van de resultaten. Hoewel verschillende studies bevestigen dat dergelijke meetfouten geen significante rol spelen, wordt in dit onderzoek voorzichtigheid betracht rondom deze kwestie. Toekomstig longitudinaal onderzoek zou meer inzicht kunnen bieden met betrekking tot de twee hier genoemde beperkingen.

Vervolgonderzoek

Gedurende dit onderzoek zijn een aantal relevante en interessante zaken aan het licht gekomen, buiten het bereik van de huidige studie, maar aanbevelingswaardig voor toekomstig onderzoek naar ouderlijke mediasocialisatie. Zo benadrukt met name pedagogisch onderzoek het belang van de band tussen ouder en kind voor een succesvolle ofwel effectieve ouderlijke opvoeding. Vooral kenmerken als de warmte

en gehanteerde opvoedingsstijl in het ouderlijk gezin blijken van groot belang voor de ontwikkeling van een kind (e.g. Baumrind, 1967; Bianchi & Robinson, 1997; Coleman, 1988; Grusec & Davidov, 2010). Toekomstig onderzoek kan meer inzicht bieden in deze kwestie door het opnemen van concrete metingen van ouderlijke opvoedingsstijl en de ouder-kind relatie. Een tweede aanbeveling voor vervolgonderzoek komt voort uit bevindingen die aantonen dat mediaconsumptie verschilt tussen meisjes en jongens. Dit betekent dat mediasocialisatie mogelijk verschillend ervaren wordt door jongens en meisjes, en wellicht ook anders wordt aangeboden door vaders en moeders. Meer inzicht in dergelijke genderverschillen in de langetermijneffecten van ouderlijke mediasocialisatie is wenselijk.

Opvallend is dat in dit onderzoek weinig significante langetermijneffecten gevonden zijn van ouderlijke televisiebegeleiding. Het grotendeels ontbreken van gegevens over mediagebruik van de respondent in diens kindertijd speelt hierbij mogelijk een belangrijke rol (zie hoofdstuk 6). Meer informatie over de mediaconsumptie in de kindertijd alsook de leeftijd waarop de diverse begeleidingsactiviteiten ervaren zijn zal naar verwachting een belangrijke bijdrage kunnen leveren aan het inzichtelijk maken van het mediasocialisatieproces.

Inmiddels heeft de computer en met name internet een belangrijke positie ingenomen in het mediagebruik van zowel volwassenen als kinderen. Ook digitaal mediagebruik blijkt, evenals lezen en tv-kijken, sociaal gedifferentieerd (Notten, Peter, Kraaykamp & Valkenburg, 2009). Daarnaast laten recente studies zien dat de strategieën die ouders toepassen bij het monitoren van het digitale mediagebruik van hun kinderen, veel lijken op de verschillende vormen van ouderlijke tv-begeleiding (e.g. Livingstone & Helsper, 2008; Nikken & Jansz, 2006). Dit leidt tot de verwachting dat ouderlijke digitale mediasocialisatie, zowel wat voorbeeld als begeleiding betreft, significant zal verschillen tussen gezinnen. Op basis van de bevindingen in dit onderzoek mogen we dan ook verwachten dat ouderlijke digitale mediasocialisatie zowel positieve als negatieve langetermijneffecten uit kan oefenen op de ontwikkeling en het welzijn van een kind. Toekomstig onderzoek zal hier mogelijk meer over kunnen zeggen. Dit betekent niet dat onderzoek naar digitale media en socialisatie belangrijker is of zal zijn dan naar de 'oude media'. Mensen kijken nog steeds een groot (vaak overgroot) deel van hun vrije tijd naar de televisie. Bovendien is tv-kijken een activiteit die al op zeer jonge leeftijd kan plaatsvinden; voor computer en internetgebruik ligt de beginleeftijd hoger. Daarnaast blijven leesvaardigheden ook, of misschien wel juist, in het digitale tijdperk van cruciaal belang. Zowel voor de onderwijsprestaties als voor effectief internetgebruik zijn goede leesvaardigheden essentieel. Dit onderzoek onderschrijft het belang van de diverse beleidsprogramma's en initiatieven rondom 'mediawijsheid' in de huidige samenleving. Maar daarbij is het wel van belang aandacht te besteden aan het hele repertoire van mediavaardigheden, waarbij de 'oude media' een plaats krijgen in het huidige digitale tijdperk.

Dit onderzoek toont bovenal het belang aan van ouderlijke mediasocialisatie voor een gezonde ontwikkeling en het toekomstige succes van een kind. Uit dit onderzoek blijkt ook dat naast de positieve gevolgen van ouderlijke mediasocialisatie in sommige gezinnen kinderen een minder gunstige of zelfs nadelige mediasocialisatie ervaren. Beleidsmakers en pedagogen kunnen een belangrijke rol spelen bij het ondersteunen van deze gezinnen en het creëren van meer (gelijke) kansen voor deze kinderen door het aanbieden van media-educatie programma's. Mediasocialisatie verschillen en de gevolgen hiervan zijn langdurig van invloed; dit benadrukt het belang van het vroegtijdig stimuleren van 'gezond' mediagebruik door ouder en kind.

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Appendix 1: Bivariate correlations (belonging to chapter 2)

	Parental highbrow reading	Parental lowbrow reading	Parental highbrow television viewing	Parental lowbrow television viewing	Parental reading guidance	Parental instructive television guidance	Parental restrictive television guidance	Parental television covieing
Respondents' birth year	0.062 *	0.052 *	0.032	-0.012	0.137 *	0.090 *	-0.059 *	0.007
Respondents' sex	0.010	0.014	0.059 *	0.029	0.157 *	0.042	0.039	0.085 *
Parental educational level	0.513 *	0.203 *	0.260 *	-0.218 *	0.371 *	0.162 *	0.125 *	-0.018
Parental occupational status	0.412 *	0.171 *	0.223 *	-0.201 *	0.335 *	0.138 *	0.077 *	-0.024
Parents divorced	0.028	-0.038	-0.005	-0.039 *	-0.022	-0.067 *	0.010	-0.098 *
Mother's age at childbirth	0.009	-0.082 *	0.099 *	-0.061 *	-0.043 *	-0.025	-0.037	0.017
Working mother	0.059 *	0.044 *	0.013	0.008	0.066 *	0.075 *	-0.022	0.019
Family size	-0.090 *	-0.145 *	-0.058 *	-0.046 *	-0.224 *	-0.169 *	-0.024	-0.124 *
Parental highbrow book reading		0.392 *	0.339 *	-0.182 *	0.475 *	0.277 *	0.173 *	0.052
Parental lowbrow book reading			0.133 *	0.074 *	0.302 *	0.157 *	0.110 *	0.075 *
Parental highbrow television viewing				-0.007	0.322 *	0.251 *	0.119 *	0.146 *
Parental lowbrow television viewing					-0.113 *	0.009	-0.123 *	0.182 *
Parental reading guidance						0.466 *	0.213 *	0.254 *
Parental instructive television guidance							0.312 *	0.475 *
Parental restrictive television guidance								0.075 *

Significance: * $p < 0.5$ Source: FSDP 1998, 2000, 2003 (N=2,608; N=1,155).

Appendix 2: Bivariate correlations (belonging to chapter 3)

	Parental television time	Parental reading time	Parental highbrow book reading	Parental lowbrow book reading	Parental highbrow television viewing	Parental lowbrow television viewing	Parental reading guidance	Parental instructive television guidance	Parental restrictive television guidance	Parental television covieing
Respondents' educational level	-0.194 *	0.238 *	0.298 *	0.151 *	0.160 *	-0.130 *	0.277 *	0.108 *	0.076 *	0.024
Parental television time		-0.094 *	-0.148 *	-0.018	-0.010	0.413 *	-0.156 *	-0.044 *	-0.112 *	0.108 *
Parental reading time			0.731 *	0.594 *	0.257 *	-0.060 *	0.419 *	0.246 *	0.163 *	0.090 *
Parental highbrow book reading				0.438 *	0.329 *	-0.149 *	0.502 *	0.289 *	0.182 *	0.073 *
Parental lowbrow book reading					0.146 *	0.085 *	0.324 *	0.162 *	0.116 *	0.105 *
Parental highbrow television viewing						0.026	0.311 *	0.278 *	0.142 *	0.186 *
Parental lowbrow television viewing							-0.095 *	0.004	-0.093 *	0.170 *
Parental reading guidance								0.488 *	0.225 *	0.282 *
Parental instructive television guidance									0.307 *	0.502 *
Parental restrictive television guidance										0.100 *

Significance: * $p < 0.5$ Source: FSDP 1998, 2000, 2003

Appendix 3 Additional multilevel regression models on educational attainment of parental media socialization, unstandardized coefficients (belonging to chapter 3)

	Model 4 ^a			Model 5 ^a			Model 4 b		Model 5 b		Model 4c		Model 5c			
	b	s.e		b	s.e		b	s.e	b	s.e	b	s.e	b	s.e		
Individual level (level 1)																
Respondents' sex (1=female)	-0.23	**	0.08	-0.22	**	0.08	-0.21	**	0.08	-0.21	*	0.08	-0.23	**	0.08	
Respondents' birth year (1964=0)	0.01		0.01	0.01		0.01	0.01		0.01	0.00		0.01	0.01		0.01	
Family composition																
Mother's age at childbirth (29=0)	0.01		0.01	0.01		0.01	0.01	**	0.01	0.01	***	0.01	0.01		0.01	
Parental divorce (1=divorced)	-0.66	**	0.23	-0.73	**	0.23	-0.78	**	0.23	-0.87	***	0.15	-0.79	**	0.23	
Family level (level 2)																
Working mother (1=working)	0.03		0.12	0.01		0.12	0.05		0.12	0.02		0.12	0.05		0.12	
Family size (1-8)	-0.23	***	0.03	-0.23	***	0.04	-0.26	***	0.04	-0.27	***	0.04	-0.24	***	0.04	
Parental social background																
Parental educational level (10=0)	0.23	***	0.02	0.23	***	0.02	0.25	***	0.02	0.24	***	0.02	0.23	***	0.02	
Parental occupational status	0.02	***	0.00	0.02	***	0.00	0.03	***	0.00	0.02	***	0.00	0.02	***	0.00	
Parental media example																
Parental television time (0/1)	-0.62	***	0.11				-0.70	***	0.11				-0.62	***	0.11	
Parental reading time (0/1)	0.17		0.13				0.34	**	0.13				0.15		0.13	
Parental highbrow television viewing (0-1)				0.19		0.22				0.41		0.22			0.22	
Parental lowbrow television viewing (0-1)				-0.56	**	0.20				-0.59	**	0.20			-0.51	**
Parental highbrow reading (0-1)				0.38		0.26				0.74	**	0.25			0.37	
Parental lowbrow reading (0-1)				0.17		0.21				0.29		0.21			0.13	
Parental media guidance																
Parental instructive television guidance (0-1)							-0.33		0.24	-0.43		0.24	-0.72	**	0.24	
Parental restrictive television guidance (0-1)							0.15		0.20	0.17		0.20	0.10		0.20	
Parental television covieing (0-1)							0.12		0.22	0.01		0.23	-0.03		0.22	
Parental reading guidance (0-1)	1.04	***	0.22	1.03	***	0.24							1.36	***	0.23	
Intercept	12.62	***	0.22	12.28	***	0.25	13.30	***	0.23	12.71	***	0.27	12.84	***	0.24	
Variance																
Individual (level 1)	4.79	***	0.14	4.80	***	0.14	4.80	***	0.14	4.80	***	0.14	4.79	***	0.14	
Family (level 2)	1.70	***	0.15	1.77	***	0.15	1.74	***	0.15	1.72	***	0.15	1.66	***	0.15	
Deviance (-2LL)	16277.89			16178.58			16039.54			16134.34			16034.13		16105.37	

Significance: *p<.05, **p<.01, ***p<.001 Source: FSDP 2003 only (N level 1 = 3,498;

N level 2 = 1,332) ^a reading guidance only ^b television guidance only ^c reading and television guidance simultaneously

Appendix 4: Country (mean) scores (belonging to chapter 4)

Country	N	Science performance	GDP per capita	Tertiary education (%)	Country	N	Science performance	GDP per capita	Tertiary education (%)
Azerbaijan	3778	392.43	6172	15	Romania	4606	422.90	9368	52
Argentina	3849	407.23	11985	64	Russian Federation	5422	485.12	11861	72
Australia	13259	529.40	33035	73	Serbia	4503	440.88	9468	36
Austria	4709	515.79	35523	50	Slovak Republic	4464	495.76	17837	45
Belgium	8157	524.02	33243	63	Slovenia	6269	497.85	25021	83
Brazil	8025	392.34	8949	25	Spain	18512	507.69	29208	67
Bulgaria	4038	448.00	10295	46	Sweden	4162	509.49	34056	79
Canada	20973	527.25	36687	62	Switzerland	11705	510.62	37396	46
Chile	4852	445.37	12997	47	Thailand	5781	433.83	7613	46
Colombia	3958	398.93	6381	31	Tunisia	3869	390.01	6958	31
Croatia	4915	497.72	14309	44	Turkey	4412	430.61	11535	35
Czech Republic	5652	541.67	22004	50	United Kingdom	11550	524.07	32654	59
Denmark	4101	499.68	35125	80	United States	5104	495.34	43968	82
Estonia	4729	535.02	19155	65	Uruguay	4354	444.36	10203	46
Finland	4519	565.26	32903	93					
France	4212	506.51	31980	56					
Germany	4272	525.60	31766	48					
Greece	4636	480.35	31290	95					
Hong Kong-China	4426	549.02	39146	33					
Hungary	4144	512.42	18154	69					
Iceland	3635	494.45	35814	73					
Indonesia	9033	389.16	3455	17					
Ireland	4283	514.45	40823	59					
Israel	3444	474.07	24405	58					
Italy	20913	489.82	28828	67					
Japan	5313	538.79	31951	57					
Jordan	5006	441.05	4654	39					
Korea	5063	523.38	22985	93					
Kyrgyzstan	4494	337.98	1813	43					
Latvia	4440	496.49	15389	74					
Lithuania	4460	491.25	15739	76					
Macao-China	4583	510.98	44114	57					
Mexico	28455	426.89	12176	26					
Montenegro	3670	416.27	9250	36					
Netherlands	4531	534.99	36099	60					
New Zealand	4310	542.25	25260	80					
Norway	4318	493.50	51862	78					
Poland	5261	505.66	14675	66					
Portugal	4838	481.53	20845	55					

Source: PISA 2006 (N level 1 = 345,967; N level 2 = 53)

Appendix 5: Bivariate correlations (belonging to chapter 5)

	Parental lowbrow reading	Parental highbrow television viewing	Parental lowbrow television viewing	Parental instructive television guidance	Parental restrictive television guidance	Parental television coviewing	Parental reading guidance	Respondents' educational level	Respondents' lowbrow reading	Respondents' highbrow reading	Respondents' lowbrow television viewing	Respondents' highbrow television viewing	
Parental highbrow reading	0.392 *	0.329 *	-0.199 *	0.281 *	0.165 *		0.090 *	0.511 *	0.247 *	0.099 *	0.348 *	-0.131 *	0.211 *
Parental lowbrow reading		0.120 *	0.089 *	0.156 *	0.076 *		0.119 *	0.312 *	0.096 *	0.236 *	0.193 *	-0.057 *	0.066 *
Parental highbrow television viewing			0.014	0.242 *	0.094 *		0.119 *	0.278 *	0.138 *	0.067 *	0.188 *	-0.051 *	0.224 *
Parental lowbrow television viewing				-0.003	-0.113 *		0.204 *	-0.153 *	-0.139 *	0.043 *	-0.115 *	0.169 *	-0.113 *
Parental instructive television guidance					0.322 *		0.503 *	0.476 *	0.071 *	0.060 *	0.131 *	0.027	0.133 *
Parental restrictive television guidance							0.113 *	0.231 *	0.052 *	0.059 *	0.109 *	-0.057 *	0.058 *
Parental television coviewing								0.281 *	0.000	0.068 *	0.053 *	0.073 *	0.040 *
Parental reading guidance									0.265 *	0.225 *	0.350 *	-0.093 *	0.180 *
Respondents' educational level									0.094 *	0.395 *	-0.277 *	0.282 *	
Respondents' lowbrow reading										0.314 *	0.020	0.047 *	
Respondents' highbrow reading											-0.221 *	0.404 *	
Respondents' lowbrow TV viewing													-0.114 *

Significance: * $p < 0.5$ Source: FSDP 2003, 2009 (N=2,539)

Appendix 6: Bivariate correlations (belonging to chapter 6)

	Parental restrictive television guidance	Parental instructive television guidance	Parental television coviewing	Respondents' childhood television viewing	Respondents' pre-adult weight status	Respondents' educational attainment	Respondents' adult television viewing	Respondents' current (adult) weight status
Parental television viewing example	-0.196 *	-0.101 *	0.088 *	0.452 *	0.045	-0.212 *	0.371 *	0.074 *
Parental restrictive television guidance		0.339 *	0.143 *	-0.136 *	-0.005	0.056 *	-0.059 *	0.001
Parental instructive television guidance			0.530 *	0.000	-0.014	0.062 *	-0.086 *	-0.065 *
Parental television coviewing				0.152 *	0.003	0.012	0.042	-0.005
Respondents' childhood television viewing					0.103 *	-0.134 *	0.406 *	0.087 *
Respondents' pre-adult weight status						-0.075 *	0.076 *	0.578 *
Respondents' educational attainment							-0.264 *	-0.147 *
Respondents' adult television viewing								0.180 *

Significance: * $p < 0.5$ Source: FSDP 2009 (N=1,377)



Curriculum Vitae

Natascha Notten was born in Herwen, the Netherlands, on the 16th of April 1972. She completed her secondary education at Liemers College in Zevenaar in 1990. After finishing her first year ('propedeuse') Sociology at the Radboud University in Nijmegen in 1991, she started to study classical clarinet at the 'Hogeschool voor de Kunsten Arnhem' (Artez) where she received her Bachelor's degree in 1997. During and after this study she worked for several years as a musician.

From 2001 she continued her study in Sociology at the Radboud University Nijmegen and received her Master's degree cum laude in 2005. Thereafter she became a PhD candidate at the Interuniversity Center for Social Science Theory and Methodology (ICS) and worked on her PhD thesis at the department of Sociology at the Radboud University Nijmegen. There she was also involved as a teacher in several courses. For more information see www.nnotten.nl.

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Media literacy is an important part of socialization and with media use becoming ever more essential in modern society, research on parental media socialization is vital. This study proposes the intergenerational transmission of parent's media competencies, as a specific kind of cultural socialization, to be an influential component of the transmission of social inequality. Beneficial and detrimental long-term effects of parental media examples, guidance activities and media resources in the family home are scrutinized, as well as the social differences herein between families. This study's first step is to find out the actual extent of social differentiation in parental media socialization depending on the parental social background and family composition. Next, long-term effects of parental media socialization are analyzed on children's educational success, media tastes and weight status (BMI).

This study holds a life course perspective and investigates parental media socialization from a Dutch and international perspective by employing large-scale cross-sectional datasets. Multivariate and multi-level models are used to analyze differences between families and countries, structural-equation models provide more insight into the processes underlying parental media socialization.

Natascha Notten (1972) graduated in Sociology at the Radboud University Nijmegen in 2005. She conducted the present study at the Interuniversity Center for Social Science Theory and Methodology (ICS) in Nijmegen. For more information about her research and interests see www.nnotten.nl