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PARENTING COGNITIVE DEVELOPMENT:

**THE INSTITUTIONAL EFFECTS OF MASS EDUCATION ON THE
SOCIAL CONSTRUCTION OF CHILDHOOD AND PARENTING**

A Thesis in

Sociology

by

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Abstract

A pivotal idea in this dissertation is that prevailing notions of childhood have changed over time in the U.S. Specifically, I show that changes have occurred in parent behaviors regarding cognitive development of their young children and argue that the growing trend in the *parenting of cognitive development* in young children in the latter half of the 20th century was largely attributable to the institutionalization of mass schooling. This dissertation examines *parenting cognitive development* from 1951 to 2001 in five ways. First, I compare and contrast three strains of relevant theoretical work from Peter Berger, John Meyer and Phillip Aries. Second I review several relevant literatures: 1) the sociological literature on changes in parenting in the U.S. during the 20th century; 2) the research literature on changes in the U.S. during the 20th century in expert literature to parents on cognitive development of children; 3) the research literature on parental involvement in schooling; and 4) the demographic literature on family trends in the 20th century. Next, I present analyses of parent behavior from Patterns of Childrearing 1951-52, the Detroit Area Study 1963, and the National Household Education Surveys 1991 and 2001 to show the changes in parent behaviors around the cognitive development of their children in the U.S. in the 50 year span from 1951 to 2001. Fourth, I demonstrate the changing impact of household income and mothers' education as evidence of the overall influence of mass education on norms and behaviors of parents. Finally, I describe the normative nature of *parenting cognitive development* by the beginning of the 21st century using the National Household Education Survey 1991, 1993, 1996, 1999, and 2001 and speculate on its implications for the sociologies of parenting and education, as well as a neo-institutional analysis of schooling. In addition, I contrast my institutional argument with a demographic one. The results show parents increasingly spent more time engaging in activities related to cognitive development over the second half of the 20th century so that by 1991 it was normative behavior but continued to increase in the following decade. In addition, mothers' education became an increasingly better predictor of *parenting cognitive development* over the latter half of the 20th century however, in the last decade of the 20th century the effects of mothers' education on *parenting cognitive development* declined and the trends began to converge as further evidence of *parenting cognitive development* as normative behavior.

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We don't catch hold of an idea,
rather the idea catches hold of us and enslaves us and whips us into the arena so that we,
forced to be gladiators,
fight for it.

Heinrich Heine

This dissertation is dedicated to the munerarius and lanista,
but mostly to the spectators,
sitting patiently in the coliseum watching the games,
ever so gently pressing downward when my arm extended upward,
my finger aching for the sky,
my ears certain they heard the words habet, hoc habet.

Chapter 1

Introduction

This dissertation examines the social change in childhood and parenting in recent times; it looks at the social construction of childhood and parenting in the latter half of the 20th century and specifically focuses on the family's pursuit of cognitive development in young children. I hypothesize that there has been a growing trend in *parenting cognitive development* in young children in the latter half of the 20th century and that this trend is largely attributable to the institutionalization of mass schooling accompanied by its role in the public legitimization of cognitive performance as a central individual and collective resource in modern society.

There is abundant anecdotal evidence available at the turn of the 21st century showing that the contemporary parenting role includes responsibilities towards the intellectual development of children in addition to the more traditional behavioral and moral development. Bookstores are filled with academic workbooks for preschool and school-aged children and there is a thriving advice literature for parents on enhancing children's cognitive development, starting with in utero exercises for fetal brain stimulation. The television sports ads for home study programs to improve children's cognitive skills and a booming business in tutoring; fully an estimated one third of all families in developed nations regularly buy some form of tutoring or outside-school assistance to enhance their child's cognitive performance (Baker et al. 2001). In addition,

the consumption of professional assessments and use of drugs for mood control to maximize cognitive development have increased dramatically in recent years.

Recent educational research has also emphasized the benefits of parental involvement in developing children's cognitive ability. For example, over the past two decades considerable research has focused on parental involvement in education and stressed the importance of an active parent in children's education experience (e.g. Epstein 1987, Lareau 1989, Marjoribanks 1979). Related, the proscriptive literature on improving schools in the U.S. and worldwide starts with the assumption that high quality schools have teachers who get parents involved, often on a very cognitive level, in their children's education (e.g. Epstein 1996). This surge in research in parent behavior and children's cognitive educational outcomes frequently looks at the benefits of parental involvement, the various aspects of parental involvement, and/or the varying rates of participation by subpopulations.

Although evidence of a profound reorientation towards the parenting role is widely incorporated in modern society, the origins and development of this historical phenomenon have not, to date, been fully explored. Indeed, the education literature is a-historical, rarely considering the existence of historical trends; the role of the parent, particularly the mother, as cognitive developer is considered highly modern, but without being embedded in an history of social development of an expanding parent role. Instead, critiques of the parent role in the U.S. system of education often begin with the expectation that parents should be involved in their child's schooling. Other critiques argue there is a middle class bias for parental involvement in U.S. schools (i.e. Lareau 1989). Much of the child rearing literature in these areas describe parents as

‘scaffolding’ in the cognitive development of young children. The proscriptive part of the school improvement and child rearing literatures therefore implicitly focus only on the notion of a deficit among certain groups of parents (i.e. low SES) in fully participating in the cognitive development of their children and imply that parents must be involved in their child’s schooling and that there is an appropriate way in which to be involved.

Here, I develop the concept of *parenting cognitive development* as a distinctly new part of the parenting role that has emerged over the past century, and should be considered an important aspect in the sociology of parenthood in modern society.

Although many activities are included in *parenting cognitive development*, as an indicator of this larger trend, I specifically look at age appropriate cognitively focused activities that researchers and practitioners believe promote cognitive development and school readiness in very young children. They are activities commonly found in early childhood education classrooms. The activities require interaction between parent and child and include things such as reading to your child, teaching letters, numbers and words, and arts activities. These are behaviors parents engage in with their children and reflect parents’ interest in cognitive development and therefore, do not include physical or moral development. I look at these activities for young children before the onset of formal schooling, that is, children in kindergarten and before.

There is so much evidence of contemporary parents’ involvement in the cognitive development of young children that it is possible to believe that *parenting cognitive development* is, and has always been, a priority for modern American parents and that there has been no historical increase in the general *parenting cognitive development*. In addition, the research on social status and parenting deficits in cognitive involvement

assumes the often-reported positive relationship between socioeconomic status and parental involvement is static. Although these literatures are useful in understanding *parenting cognitive development*, and I incorporate many of their ideas below, they lack the historical framework incorporated here. The a-historical perspective is further reinforced by policy debates about school readiness in young children that frequently set middle class children and current school demands as the standard and often point to discrepancies between subpopulations as evidence of the failure of state-funded preschool programs, as well as parents, in preparing young children for formal schooling (Devaney et al 1997).

Is there a long-term U.S. historical trend in *parenting cognitive development* or has such parenting been the case since the advent of mass schooling? More specifically, has there been a measurable change in *parenting cognitive development* of young children over the latter half of the 20th century? Is there a growing trend? If group differences exist in the practice of *parenting cognitive development*, is there evidence of diffusion and a narrowing of the gap throughout the population of American parents? An historical analysis, as undertaken here, might find a consistent positive relationship between family SES and *parenting cognitive development*, but it may also find that *parenting cognitive development* is increasing in all sub-populations but not necessarily at the same rate in each of them.

Most of the literature on change in families stems from either a demographic model of change or a more social constructionist image of change. The former tends to be less historical and more likely to be underpinned by a rational choice image of parent and child. The latter is very historically dependent and underpinned by a more

institutional and phenomenological image of social relations. For example, some have argued that the decline in infant mortality enhanced the status of children within the family (i.e. Shorter 1975) and similar demographic arguments have also been used to explain more recent changes in the family (i.e. Alwin 1996). Family is our primary institution of socialization and it has experienced several important changes in the recent past. These include the decline in fertility, the rise in single parent households, the rise in female labor force participation, and the rise in educational attainment. A flurry of new research looks at the intersection of family demography and children's lives and has shown with some success the impact of demographic changes on children's time use (e.g. Hofferth and Sandberg 2001). Certainly, some of these changes in the family have had important direct affects on children. However, the results are not always as expected and there is contradictory evidence (see for example, the two positions on the implications of the rise in female labor force participation on children's cognitive development by Belsky and Eggebeen 1991 and Parcel and Menaghan 1994). Some argue demographic changes such as the decline in fertility have intensified parenting (Alwin 1996). It is plausible to assume that with smaller families intensity in parenting increases, however, it is not at all evident what the content of that parenting would or should be. There is no reason to assume that the pursuit of young children's cognitive development is a natural byproduct of the decline in family size or any other demographic change. Other important institutional changes may also contribute to the rise in parenting of young children's cognitive development. Here I link the rise of mass schooling and subsequently the increase in female educational attainment with the increase in *parenting cognitive development*.

Education as a powerful and dynamic institution in modern society creates the role of ‘parent as teacher’ and subsequent pursuit of *parenting cognitive development*. As increasingly larger proportions of the population went to school and stayed in school longer, *parenting cognitive development* spread through the population of parents although additional mechanisms probably assisted in this spread later in the diffusion process. They may include public policy such as parental involvement in schooling and the school readiness campaign, and expert literature such as parent magazines.

Social historians have also contemplated the effects of dynamic institutional trends on children’s lives. Specifically, they have explored the relationship of demographic and economic changes on childhood as a socially constructed stage of life. Childhood, many social historians believe, emerged with a resurgence of interest by moralists and reformers in the early modern period and began a gradual enhancement of the status of children over time. They argue that our conception of childhood, which attaches special meaning to this stage and where children are at the center of family life, is a modern invention (Aries 1962, Shorter 1975). This transformation of daily life from public to private and the institutionalization of childhood as a separate developmental stage intensified the relationship between parent and child (Stone 1977). But the intensification of the parent-child relationship can take many forms.

In addition to examining the empirical trend in *parenting of cognitive development*, I also compare both demographic and social construction explanations of this phenomenon. To foreshadow my conclusion, I argue that in recent times a consequence of the historical intensification of parenting is in part seen in the extensive efforts among parents in the pursuit of their young children’s cognitive development.

Further, although demography certainly gives context to trends in childhood, I argue that the crucial institutional component is the historical rise and intensification of mass schooling. Schooling as an institution seems to focus parents on the cognitive development of their children in a way that demographic trends or the emergence of childhood as an institutionalized developmental stage could not.

Many social historians have argued that childhood and adolescence emerged as life stages as a result of school expansion. Children spend increasingly large amounts of time separated from the larger community in age-graded settings (Chudacoff 1989). As the social world has evolved in the modern era, expectations around specific age categories have changed. School expansion is especially important because it is a mechanism for the spread of *parenting cognitive development* of young children and an indicator of growing strength of schooling as an institution. As a powerful institution in modern society, schooling legitimates *parenting cognitive development* in young children. The rise of mass education and the modern middle class family, with cognitive pursuits and the child-nurturing mother at its center, propelled parenting and cognitive development together into a tight institutional bond. The reasons for this include an increasing focus on cognitive performance as the main criterion of successful student behavior, a greater and fully legitimated role of schooling in status attainment, and direct involvement of parents as subordinate partners in schooling (Meyer 1977). As a consequence, this bond between parent and child in pursuit of cognitive development has tightened, and so has the amount of time spent by young children and their parents in activities pursuing cognitive development. I argue that this powerful combination of institutional forces leads one to predict an historical trend in increased *parenting*

cognitive development. And, it is not merely a function of a simple change in one sphere causing a change in another, but rather a complex set of institutional forces together influencing the family, childhood, and the importance of schooling as a socializing agent.

Is this a trend or have parents always engaged in *parenting cognitive development*? This dissertation describes *parenting cognitive development* at the turn of the 21st century, investigates the possibility that these behaviors have increased over the second half of the 20th century and examines the relationship of SES and *parenting cognitive development* over time.

The remainder of this dissertation proceeds as follows: Chapter 2, The Meaning of Childhood: A Social Constructionist Perspective traces the historical changes in how meaning is created around childhood. In particular this chapter explores two reoccurring themes within this literature, the rise of mass schooling and family demography. This chapter also lays out the institutional perspective from which the hypotheses flow. Chapter 3, Data and Methods, describes the several secondary data sources as well as the variables within and methods used to test the hypotheses. Chapter 4, Parenting Cognitive Development at the Turn of the 21st Century, examines the current sociology of education literature on parental involvement in schooling and cognitive development of young children. The findings in this chapter serve as a statement of the empirical phenomenon (hypotheses 1 and 2) that is examined historically in chapters 5 and 6. Chapter 5, Setting the Trend: Changes in Parenting Cognitive Development from 1951 to 2001, examines changes in the parenting of children's cognitive development over the last half of the 20th century. It reviews the sociological literature on parenting in the 20th century and presents empirical analyses (hypothesis 3) from across the second half of the 20th century

to establish the trend in *parenting cognitive development* and document its spread throughout the population of American parents. Chapter 6, Trends in Household Income, Mothers' Education and *Parenting Cognitive Development*, examines the trends in socioeconomic differences in *parenting cognitive development* (hypotheses 4a, b, c, d, e, and f). Specifically, it looks at the relationship of these trends over time. Does the relationship remain stable or is the gap narrowing over time? Chapter 7, Demographic Changes and the Trend in *Parenting Cognitive Development*, lays out the main demographic changes to the American family in the 20th century and undertakes an analysis comparing the effects of demographic variables with mothers' education in predicting variation among parents in their efforts towards cognitive development of young children (hypotheses 5a, b and c). Chapter 8, *Parenting Cognitive Development and the Social Construction of Parenthood* concludes this dissertation by considering schooling's role in creating the role of 'parent as teacher' and draws conclusions about the implication of these analyses for a social constructionist historical perspective on the institutions of modern family, mass schooling and childhood.

Chapter 2

The Meaning of Childhood: A Social Constructionist Perspective

This chapter lays out the theoretical groundwork from which the hypotheses to be developed flow. First, I describe and compare three key social constructionists, Peter Berger, John Meyer and Philippe Aries because they provide the theoretical framework for this dissertation. Although not commonly cited together, each of these constructionists describes the profound affect institutions have on modern life. Next, I review the literature on the social construction of childhood because the institutionalization of childhood as a specific and unique developmental stage has implications for the family and parenting. And finally, I present the hypotheses that will be tested in later chapters.

Childhood as a Historical Subject

Although we easily recognize change in certain realms of life, for example, the use of ever more sophisticated technology or the increase in life expectancy, identifying gradual change in our social environment and its effect on the social meaning of human development is more complex. Forty years ago social historians lamented that the history of childhood had yet to be written. Certain key trends were established over the ensuing years. Many social historians agree that one major change during the modern period was the enhanced value of children within the family and hence within society. Further, closely aligned to the telling of the history of family and other everyday

institutions was the intellectual development of a “social construction of reality” perspective on the dynamics of social change. The establishment of this social historical work on notions of childhood over time from a general social construction perspective is fundamental to my arguments about the rise of *parenting cognitive development*.

Social historians attribute the enhancement of children’s status to various causal mechanisms. But the most frequently occurring themes in the literature point to the influence of family demography and to a lesser extent the rise of mass schooling. In particular, the decline of infant mortality is often cited as a contributor to increased emotional commitment of parents toward children (i.e. Shorter 1975). In addition, some historians argue that these trends began first in the upper classes and slowly trickled down to the working classes (i.e. Aries 1962, Shorter 1975, Stone 1977). As I argue later, however, a few social historians note that the dramatic changes in children’s lives were brought about in part by the rise of mass schooling (Aries 1962, Chudacoff 1989, Hopkins 1994, Stone 1977). Schooling, they argue, separated children from adult society (Aries 1962) so that by the second half of the nineteenth century education dominated children’s lives (Hopkins 1994) and led to heightening distinctions between age groups (Chudacoff 1989).

Family and schooling are our main institutions of socialization in modern society. As such, they have important implications for how individuals make sense of the world around them. In addition, institutions have an impact on each other. This dynamic interplay between institutions is an important component of neo-institutional theory, and I employ this image to develop a model of the interplay between family and schooling in the creation of childhood as a separate developmental stage. This inter-institutional

interplay is crucial to my overall argument because ultimately I argue that it is schooling, as perhaps the more powerful institution of the two, which creates the role of 'parent as teacher.'

The Social Construction of Reality and Institutions

Through many of his writings, Peter Berger attempted to address the way in which reality is constructed (e.g. Berger 1963, Berger and Luckman 1966). He is not concerned with the question of 'What is really real?' but rather, how social reality comes about and maintains its validity. Unlike prior sociological theory, he attempts to bridge micro and macro orientations by synthesizing the interactionist and structuralist approaches, and in doing so he creates a unique way of explaining gradual change in human behavior over time. Instead of ignoring or rejecting the image of social structure like Goffman, Blumer, and Garfinkel tend to do, he moves beyond the micro sociological concerns. Following Durkheim, Berger acknowledges that the existence of an objective social reality is formed out of the action of people within social structures. Reality is socially constructed through the institutional (structural) channeling of meaning that shapes individual subjective interpretations of the world.

Berger and other social constructionists attempt to synthesize objective and subjective social realities through three continual processes of objectivation, internalization, and externalization. These processes represent a gradual reciprocal process. Human beings are both subject to, and instruments in, the creation of the objective social world. The objective social world shapes individuals through internalization or the socialization process. However, the socialization process is never

perfect and therefore human beings act back upon the social structure and collectively construct a new reality; this is the process of externalization. The objective social world or social institutions are the result of human activity in the form of externalization processes. Change is slow and persistent, and in this way the world is “socially constructed” by individuals who are both products and producers of social institutions (Berger and Luckman 1966).

The work of John Meyer emerges from this constructionist perspective by demonstrating the power of institutions in modern society. Meyer uses a neo-institutional approach to the sociology of education and focuses on the origins and expansion of mass schooling, the institutional underpinnings of education in society, and the ways in which schooling alters important social constructions and institutional arrangements in modern society. For example, he uses the rise of mass schooling to illustrate the power of education in modern society. Regardless of the political or economic situation, there has been a rapid worldwide rise in mass schooling spurred by belief that education has a positive impact on national development as well as the lives of individuals. In addition, schooling is increasingly viewed as a basic human right. As Berger predicts, the rise of mass schooling not only has implications for individuals in the social construction of reality, but in turn this reality has implications for further institutional change.

Starting with a seminal article in 1977, Meyer began laying out a neo-institutional theory of schools as well as other organizations. As a departure from ‘old institutional theory’ neo-institutional theory argues institutions are not only powerful but also dynamic; society is made up of a series of interlocking institutions that can change. Neo-institutional theory draws from the work of Parsons, Garfinkel, and Berger, all who

recognized that in modern life individuals play multiple roles across multiple institutions. While Berger's work concentrates on the impact of society, or the objective social world, on the individual and vice versa, Meyer and his colleagues add another dimension. Institutions as well as individuals create social meaning. Although other approaches view education as a process of socialization, training, allocation, and social reproduction, a central assumption of neo-institutional theory is that through these processes education shapes society by classifying people into socially constructed and institutionally embedded categories with distinct social status. In other words, schooling creates new roles for modern society in a number of expanded ways over time. Everything from the theory of the domain-specific expert (e.g. psychologists, economists, geologist) to the creation of valid areas of knowledge (e.g. the rise of women studies through higher education validation over time), education is the lead institution. From this perspective it is an easy step to the role of schooling in the creation of childhood, as well as the role of parenting of children through the schooling process.

The Emergence of Childhood as a Socially Constructed Process

One example of the dialectic process and subsequent creation of meaning is the social change over time in the definition of childhood. Some social historians argue that childhood, as a distinct phase in life, is socially constructed and that there has been only a gradual acknowledgement of differences between children and adults (Aries 1962, Demos 1970, Firestone 1971, Illick 1976, Shorter 1975, Stone 1977, Tucker 1976, Zeliser 1985, Zuckerman 1970). A variety of theories abound on the emergence of childhood; some social historians have argued modernization is oppressive to childhood (Aries

1962) while others argue modern society protects childhood (de Mause 1974). Also, with a wide array of historical evidence about infant mortality rates, wet nursing, swaddling and apprenticeship as well as infanticide, abandonment, child abuse, and severe discipline, many historians have argued that adults showed indifference, or even cruelty towards children in feudal societies (Aries 1962, Badinter 1981, de Mause 1974, Hunt 1972, Lyman 1976, McLaughlin 1976, Pincheck and Hewitt 1969, Shorter 1975, Stone 1977, Thompson 1974, Tucker 1976, Walzer 1976). Regardless of the specific mechanisms, the consistent theme throughout this body of work is a heightening awareness of the distinction between adults and children and the gradual emergence of a separate status of children. Others have argued there has always been an acknowledgement of the differences between children and adults, and parenting changed very little from the 16th to the 19th centuries, and further that some basic features of human existence never change (Graham 2000, Macfarlane 1970, Pollock 1983 & 1987). These researchers focus on consistency of parenting in an attempt to demonstrate similarities in parenting over time. However, most social historians agree that the care and status of children has been enhanced over time. Our conception of childhood, which attaches special meaning to this stage and where children are at the center of family life, is a modern invention.

Social historians have debated the timing and accuracy of the emergence of childhood as a distinct phase in life since the publishing of Philippe Aries' *Centuries of Childhood* (1962), a major work of the French Annales School of histories of everyday life. Prior to these progressive historians, only political and military institutions were considered appropriate historical subjects. Aries contribution is significant as a founding

social history of the family, and as an example of the new way of thinking about institutions that emerged in the 1960s. Aries and Berger were simultaneously wrestling with issues of institutional change and the social construction of reality. While Berger wrestled with the larger question of how meaning is created in everyday life, Aries used a specific example of the gradual change in the family institution and the emergence of childhood into the center of family life.

Aries traces the social origins of childhood as a distinct phase in life in pre-industrial Europe; a socially constructed process capable of shifting fundamental meanings attached to different stages of human life. He claims childhood, as a distinct social category, emerged with a resurgence of interest in education by moralists and reformers. In the feudal West life was communal, the family served important functions such as giving life and name, and passing on property, but important intimate elements of daily life were public for most of the population. Children joined adults in day-to-day life soon after weaning, and for the most part were viewed as small adults. The initial phase of childhood emerged within the family as coddling young children. But it was not until the seventeenth century that more powerful elites in the form of social moralists (i.e. religious elites) became interested in this phase of life. Rather than regarding children as potential adult amusement or coddled play things, they viewed children as “fragile creatures of God” who differed from adults and therefore should be treated differently (Aries 1962). What has been called “the modern family” emerged during the seventeenth century as the centerpiece of daily life through this new orientation towards childhood, and children themselves were at the center of it. This emerging modern family was responsible for the moral and spiritual development of children and the

earliest beginnings of mass schooling in part developed as a result of this new interest. The role of family and school as institutions in modern, middle class life took prominence, defining a distinct phase in life and thereby removing children from day-to-day adult life.

Since Aries, other social historians continue to develop an historical account of childhood as a distinct socially constructed developmental stage. The general arguments of Aries are supported, but there is some debate over the historical timing of childhood and the extent to which it spread across all western society. For example, Demos (1970) argues that the status and treatment of children has changed over time. Using the Puritan colony at Plymouth, he agrees with Aries that childhood did not exist in the 15th century but also finds no evidence as late as the 17th century. Specifically, he argues that childhood as we know it, did not exist past six or seven years of age when children began participating in adult activities and were perceived as “little adults.” Demos shows that the nuclear family consisting of one adult couple along with their children formed the core of each household. Parents were required by law to educate children and learning took place in the home. This education mostly took the form of reading the Scriptures and providing some form of job training, as common schools were just beginning and there was little opportunity for formal schooling. Demos argues that families in Plymouth had important communal responsibilities like educating children which we now surrender to other institutions. Tucker (1976) also documents the ambivalent feelings toward children in 15th and 16th century England yet finds some evidence of shifting attitudes as the general care and concern for children improved during this time period.

Stone (1977) also finds an evolving conception of children and childhood over time and place that replaces earlier histories that focused primarily only on 16th and 17th century England. Using a vast array of documents including diaries, autobiographies, memoirs, correspondence, advice manuals, literature, and legal documents, Stone argues family life changed in this time period due in large part to what he calls the “growth of affective individualism.” Specifically, he argues within the middle and upper classes ties to the community as well as the extended family structure weakened over this time period as the bonds between husband and wife as well as parent and child were strengthened and given priority. The rise of the nation state, the spread of Protestantism, and the growth of schooling all contributed to the rise of the nuclear family. Stone argues many of these changes began first among urban bourgeoisie and trickled down, not penetrating the poor until the late 19th and early 20th centuries. Stone argues these changes are the result of an overall swaying back and forth rather than a linear increase, although most historians agree on a general linear growth of the idea of individualism.

Also noting a trickle down affect among social classes, Shorter (1975) argues that “good mothering” is an invention of modern society. Maternal love of the 17th century was particular to the upper classes. Using examples of breastfeeding, wet nursing, and infant mortality rates, he shows the high value placed on infants among ordinary people did not emerge until the late 18th century or even later. Despite the health risks associate with living in poor, rural communities, European middle class, urban families routinely sent their newborns to live with wet nurses in the country. This especially French practice was abandoned by the middle classes by 1800, but continued among lower urban classes. Shorter shows the percent of abandoned children steadily declined over

the 19th century and the percent of legitimate births dramatically increased in the latter half of that century indicating the lower classes were also increasingly demonstrating modern attitudes toward children. Like Aries, Shorter argues this shift in priorities gave the family a new focus and encouraged the withdrawal from community life in exchange for privacy and intimacy directed towards children.

Hopkins (1994) is primarily concerned with the 19th century. He looks at the lives of working class children and describes the transformation over the course of one century. At the beginning of the 19th century the lives of these children were dominated by work, but by the end of the century their lives were dominated by education. He argues that it is debatable whether young children were ever treated as miniature adults, but there is no question that in the latter half of the 19th century it was increasingly realized that young children pass through identifiable developmental stages with different psychological characteristics and needs appropriate to each stage. Chudacoff extends these observations by describing the rise in age stratification in the latter half of the 19th century and the intensification of age grading in the beginning of the 20th century. Similar to Hopkins, Chudacoff (1989) sees the emergence and expansion of common schooling as having a prominent role in the creation of age-specific definitions of children.

Zelizer (1985) suggests that the increasing sentimental value of children in the late 19th century was in part responsible for the removal of children from the family economic production. Society increasingly saw the economic and sentimental value of children as incompatible due to the “sacralization” of children’s lives. Although many argued child labor was essential to the working class family at the turn of the 20th

century, Zelizer notes that socially progressive reformers at the time “introduced a new cultural equation: If children were useful and produced money they were not being properly loved.” (Zelizer p.72).

As an interesting counterpoint to the common argument that English and American families have always been nuclear in structure, Ruggles (1987) uses a series of demographic and economic data sets to show the increased frequency of living in an extended family over the course of the 19th century especially among the bourgeoisie. Over the course of the 20th century this trend was reversed. He argues as agricultural incentives diminished with industrialization, other incentives must have arisen. Ruggles ultimately argues psychological factors like fear and insecurity produced by a rapidly changing society encourage people to seek refuge within the extended family.

Emphasis on Continuity not Change

Not all social historians agree on these points, a number have been critical of Aries’ depiction of family life in medieval times. Probably the most vehement critic of Aries’ orientation to childhood and history is Pollock (1983), who argues simply that childhood did indeed exist in the 16th century much as it does now. She claims society was well aware that children passed through identifiable stages and had specific developmental needs. Wilson (1980) argues the transition at age seven marked not the end of childhood but the entry into a new stage of childhood. He argues what society lacked was “our” awareness not an awareness. While the modern system of age-segregated schooling did not exist, apprenticeship was an important feature of occupational training as well as intergenerational relationships. Further, Pollock argues

there were very few changes in parental care and children's lives in the home from the 16th to the 19th centuries. Using diaries and autobiographies from these centuries, she asserts that there is no evidence to support Aries' claim that parenting changed in the modern era. While Aries and others have suggested that the status and treatment of children have been greatly enhanced over time, Pollock argues that the concept of childhood in earlier societies was merely different than today not absent. She believes that there are some basic features of human existence that do not change. Pollock suggests parents were concerned with, and participated in, the education of children. Mothers, in particular, took an active role teaching children to read, write and do arithmetic because parents were concerned with giving their children every opportunity.

In a later book, Pollock (1987) demonstrates the interest parents took in the education of children through journal entries and letters written from 1624 to 1889. Although Pollock presents this book merely as a set of entries without detailed interpretation of them, she assumes that we will conclude with her that all parents were equally concerned with the future and welfare of children and placed a similar value on them. However, several interesting trends emerge. Clearly the financing, encouragement, and type of education received by girls were very different from boys and this remains relatively constant over the time period. In addition, parents through the centuries seem consistently interested in the future well-being of their children. But in spite of Pollock's conclusion, a closer reading of her archive suggests several important issues around children change over time. For example, the early journal entries and letters were mostly written by men expressing interest in a child's education. However, women mostly write later entries and letters, those after 1800. This suggests that

children's cognitive development has been increasingly incorporated into the female domestic domain. In addition, earlier letters largely speak of tutors as the actual educators, while later letters often describe mothers' involvement in the education process as well. Next, several of the letters express ideas of the time with regard to education. One excerpt from approximately 1700 recommends that children begin instruction in reading and writing at one and a half to two years old. This is not inconsistent with Aries' ideas of small children as adult amusement or the "preciousness" encouraged by adults many later education writers were condemning. Finally, several of the 19th century entries demonstrate an awareness of the emerging philosophy on appropriate cognitive activities for young children.

Being the most prominent of the social constructionists in this area, Aries' thesis is specifically challenged by Pollock. Some of her most prominent evidence, however, is not inconsistent with his argument. Instead, perhaps she finds evidence to discredit only the more radical versions of an historical development of childhood by those who reject any endogenous maternal instinct and bonding with infants (i.e. de Mause 1974). Furthermore, the most problematic component of Pollock's research is her subjects. Clearly, these journals and entries are from the middle and upper classes, those capable of reading and writing as well as providing education for children in the form of tutors and private schools. As Aries argues, these are the very people who led the way during this exact period to a new orientation towards childhood. Perhaps if Pollock showed these attitudes for the peasantry during the 16th century her argument might be more convincing but written archives of essentially illiterate segments of western society are rare.

In addition to Pollock, Graham (2000) and Macfarlane (1970) also reject the gradual change thesis and instead concentrate on evidence demonstrating consistent aspects of parenting. Both show the interest and concern Puritan parents demonstrated for their children, as well as the grief at loss of a child. However, as Macfarlane notes, considerably more detail is given to childbirth than childrearing in the diary he is analyzing. In fact, there is only a brief description of the years between birth and leaving home. In addition, both authors suffer the same issues of wealth, education, and historical timing of their subjects as Pollock's historical records.

Another attack on Aries has been to generally except the evidence but reject his ultimate conclusions. Wilson (1980) points out that the huge positive reception of *Centuries of Childhood* is evidence enough of the infancy of the field. He argues Aries "present mindedness" has him search in medieval and early modern documents for modern attitudes, where he doesn't find them he claims they are absent. Ben-Amos (1995) argues Aries conception of smooth generational transitions, an 'ageless' society, were convenient and largely accepted because they were compatible with earlier sociological theories of youth. Similarly, Brown notes that the stages of childhood and adolescence emerged simultaneously in the early modern period rather than Aries' proposal that adolescence did not emerge until the mid 18th century. Social historians use a wide array of evidence. Along with available public records, diaries, autobiographies, art, furniture, clothing, and correspondence are commonly used. Some of these sources have been criticized as lacking solid proof. For example, art or paintings of children have been used as proof of depicting children as miniature adults but critics have argued that

while these sources are creative, they lack any systematic investigation and assume art reproduces real life.

These objections withstanding, many historians support the general constructionist position and have effectively argued that the idea of childhood has dramatically evolved over time. In most ways the general Aries' vision is the dominant one in the field today. There may be some quibbling over exact time periods and quality of certain types of evidence, but the image of families and childhood as an institution have changed over time, and this change transforms people's perceptions and beliefs about these now sacred things. For my investigation of trends in *parenting cognitive development*, the transformative ability of the fundamental meaning attached to childhood is an important one. The literature on the emergence of the modern family and childhood is the framework in which I will discuss more recent changes in our fundamental meaning around childhood. This meaning, of course, has implications for what we consider appropriate activities for young children. The evolution of the modern family with children at the center and our gradual heightening awareness of specific developmental stages and needs associated with them provide the framework around which to discuss the hypothesized rising pursuit of young children's cognitive development by parents. Similar to some of the social historians discussed here, I predict there has been a persistent and perhaps even rapid trickle down effect and that the relationship between SES and *parenting cognitive development* in young children has in fact diminished over the past fifty years. I suspect the trends for middle and working class parents' pursuit of cognitive development in young children are converging.

Berger, Aries, and Meyer on social change and the meaning of childhood

The transformation of modern family life to include cognitive development of young children as a priority in daily life is a prime example of the gradual changes in meaning attached to childhood and the power of institutions in contemporary life.

For Berger, changes in the modern world, like urbanization and industrialization, are associated with changes in our subjective notions of childhood and thus instigate change in the objective institutional family. Some of this social world exists in the form of laws that reflect our social norms – laws on compulsory education, child abuse, child labor, parental responsibility etc. Other aspects of this objective social reality are not so readily identifiable, but nevertheless impact many aspects of the status of children in society. Berger attempts to synthesize the objective social world described by functionalists with the subjective world emphasized by social psychologists. He does this within a sociology of knowledge framework that analyzes how both objective and subjective reality are constructed by humans and slow, gradual change rather than rapid revolutionary transitions are the result of the three on going processes of objectivation, internalization, and externalization.

Meyer, on the other hand, describes the rapid worldwide revolution in schooling as evidence of the institutional power of education in modern society. According to Meyer, institutions also create meaning and therefore shape norms and roles in modern society. Education as a powerful and dynamic institution in modern society legitimates cognitive performance as desirable currency, mastering cognitive skills gets one through school and also leads to labor market opportunities. Consequently, as schooling spreads

in amount and institutional power, parents have increasingly pursued cognitive performance in young children.

Aries also struggled with how social change occurs. He looked at the particular instance of childhood, how new heightened meaning was created around it and the simultaneous changes that took place. He described the slow process by which children came to the center of the modern family. Like Meyer, Aries described schooling as a powerful institution that transformed childhood, removing children from day to day adult life and placing them in a separate domain.

Meyer, Berger, and Aries all embrace the social construction of reality, the rise and impact of social institutions on modern life and the change associated with institutional theory. While Aries focused on an institutional theory of family and the social construction of childhood, Meyer thought about the rise of mass schooling and implications of education as a powerful institution in modern society, and Berger concentrated on the gradual change in modern life where individuals both create modern institutions and are affected by them. These three theorists all have implications for the hypothesized changes in *parenting cognitive development* in young children. The expansion of mass schooling not only has implications for early childhood education, but further schooling as a powerful institution in modern society legitimates cognitive performance as a desired individual quality and as an allocation mechanism. All three theorists generate a framework from which I will develop specific hypotheses about the rise of *parenting cognitive development* as a recent addition to the social construction of the developing child and the good parent.

Research Questions and Hypotheses

I. Can an historical trend of increasing rates of parenting of children's cognitive development be documented?

With a series of historical data that has never been applied to this topic, I examine modal trends in the institutionalization *parenting cognitive development* for the entire American population of parents, and differences in trends by socioeconomic status (hereafter SES) over the past fifty years. Although there is considerable anecdotal evidence and some ethnographic evidence of an intensifying normative trend of the parenting of children's cognitive development, there is little systematic assessment of this (e.g. Lareau 1989). There is, however, evidence of related trends. For example, evidence exists illustrating the change in advice (some of it aimed at cognitive development) given to parents on general child rearing issues over the course of the 20th century (Wolfenstein 1955, Wrigley 1989). Related, evidence exists demonstrating a general attitudinal change in parents over the course of the 20th century. For example, Alwin (1984) finds a general trend over the 20th century for parents' preference for child qualities associated with autonomy and self-direction. The Lynds' (1929) noted a similar trend in the early part of the century among middle class parents.

Previous research suggests that family SES has a significant impact on parental involvement in education (e.g. Lareau 1989). First, I look at current differences in *parenting cognitive development* in young children because related literature suggests high SES parents are more involved in the education process. Next, I look at historical trends because current research looks at single time points and therefore does not consider the possibility that this relationship has changed over time.

- *Hypothesis 1: At the turn of the 21st century, a substantial proportion of U.S. parents routinely engage in parenting cognitive development with their young children.*

To test this hypothesis I begin with a rich description of the current state of *parenting cognitive development* to show how normative this behavior has become. I paint a picture of *parenting cognitive development* at the turn of the 21st century using indicators that detail actual parent behavior with young children around cognitive activities that are often indicators of school readiness including early literacy and numeracy. They include such activities as teaching letters, numbers and words, reading to the child and visiting the library.

- *Hypothesis 2a: At the turn of the 21st century, U.S. families with more income are more likely to engage in parenting cognitive development than families with less income.*
- *Hypothesis 2b: At the turn of the 21st century, U.S. families with higher levels of maternal education are more likely to engage in parenting cognitive development than families with lower levels of maternal education.*
- *Hypothesis 2c: At the turn of the 21st century, the effect of mothers' education will be greater than the effect of household income on the likelihood of parenting cognitive development.*

In *Home Advantage* Lareau argues the inter-institutional linkages between home and school are crucial to school success in the US system. Acknowledging the well-documented finding that SES has a substantial impact on school success and parental involvement has an impact on school success, Lareau looks at the impact of SES on parental involvement (e.g. Coleman 1966, Jencks et al 1972, Stevenson and Baker 1987). She finds middle and upper middle class parents have resources at their disposal that they activate to enhance the educational experiences of their children. Middle and upper middle class children have an advantage in school according to Lareau because schools are middle class institutions that promote a middle class definition of parental involvement. These ideas have been modified some by further investigation, but the overall trend remains. High SES parents are more involved in schooling than low SES parents. I expand these ideas further through *parenting cognitive development* and its diffusion throughout the population. I hypothesize that high SES parents currently spend more time on *parenting cognitive development* in young children than low SES parents.

- *Hypothesis 3: The rate of parenting cognitive development in young children has increased historically among the entire population of parents.*

Next, I use a series of data sets to explore changes in parent behaviors in the pursuit of young children's cognitive development in the past 50 years.

- *Hypothesis 4a: Analyses over time will show an increasing trend of parenting cognitive development in young children for all family income categories, although families within high income categories will historically begin at a higher start point.*
- *Hypothesis 4b: Analyses over time will show an increasing trend of parenting cognitive development in young children for families in all categories of maternal education, although families within high maternal education categories will historically begin at a higher start point.*
- *Hypothesis 4c: Analyses over time will show an increase in the effect of mothers' education on parenting cognitive development.*
- *Hypothesis 4d: Analyses over time will show a greater effect of mothers' education than household income on parenting cognitive development.*
- *Hypothesis 4e: Although high income families will maintain an overall higher rate in parenting cognitive development, low income families will show a higher rate of increase and therefore the trends converge over time.*
- *Hypothesis 4f: Although families with more educated mothers will maintain an overall higher rate in parenting cognitive development, families with less educated mothers will show a higher rate of increase and therefore the trends converge over time.*

I hypothesize that the amount of time parents spend engaged in cognitive activities with young children has increased for all parents. However, I investigate the possibility that the trends differ by family socioeconomic indicators. I hypothesize that middle and upper middle class parents have a much higher start point and therefore

working class and low SES parents lag behind. In addition, I predict that the rate of increase for working class and low SES parents is higher than for middle and upper class parents and therefore the trends are converging. Dramatic increases in the pursuit of cognitive development in the form of frequently noted trends in parental involvement in schooling are coupled with less discussed trends in the rise in direct and indirect instruction by parents to young children. However, this rise in the pursuit of cognitive development of young children is not evenly distributed across classes. I propose there has been a general rise in the pursuit of cognitive development of all young children but that the overall rate is higher among high SES families. These changes are often attributed to class or status competition but important social changes and institutional forces can contribute to change.

II. Is the trend in parenting cognitive development attributable solely to demographic changes in the U.S. family or is the institutionalization of education in modern society resulting in significant increases in education in successive cohorts of mothers primarily responsible for the trend in parenting cognitive development?

I argue that the institutionalization of education determines the amount of time parents spend engaged in cognitive activities with young children. One powerful indicator is the rising level of mothers' education in U.S. families. Since family demography is a frequently discussed causal mechanism to the changes in children's daily lives, I assess the possibility that demographic trends alone cause the hypothesized trends in *parenting cognitive development* in young children. Using indicators of the

three main demographic trends in family, I assess the relative contribution of each to *parenting cognitive development* during the 1991 to 2001 period. Specifically, I look at the relative contribution of family size, mothers' employment status, and number of parents in the household. I compare these to mothers' education. Finally, I compare the contribution of family demography and mothers' education to the trend in *parenting cognitive development*.

- *Hypothesis 5a: Three indicators of family demography, number of children in the household, mothers' employment status and number of parents in the household contribute to the explanation of parenting cognitive development.*
- *Hypothesis 5b: Mothers' education contributes more to the explanation of parenting cognitive development than indicators of family demography.*
- *Hypothesis 5c: The trend of greater parenting cognitive development from 1991 to 2001 is more attributable to mothers' education than indicators of family demography.*

The rise in educational attainment is frequently included as a demographic trend but here I argue it is unique because it is an indicator of the institutional power of education in modern society. As an alternative to a demographic argument which might include the rise in educational attainment along with the increase in female labor force participation and single parent households and the decline in fertility, in this dissertation I use it within an institutional framework. I argue schooling in modern society is a powerful institution capable of creating the role of 'parent as teacher.'

Chapter 3

Data and Methods

I. The Data

This dissertation enlists several data sets to examine the historical development of behaviors by parents to enhance cognitive development of young children. The need for data over a long period of time requires me to piece together a number of data sets that include measures of related behaviors of *parenting cognitive development*. To establish an historical trend, I use Patterns of Child Rearing 1951-1952¹ and the Detroit Area Study 1963. These data sets have information applicable to *parenting cognitive development* and enable me to gain some historical perspective with relevant questions that are also very similar to questions within the National Household Education Surveys. I use the National Household Education Surveys (NHES) 1991, 1993, 1996, 1999, and 2001 to establish recent trends in *parenting cognitive development*. Finally, I construct a data set of demographic and enrollment indicators over the 20th century to illustrate institutional changes within family and school over the 20th century.

¹ This research used the Robert Sears, Eleanor Maccoby, and Harry Levin's study *Patterns of Child Rearing, 1951-52* data set [made accessible in 1987, raw and machine readable data files]. These data were collected by Robert Sears, Eleanor Maccoby and Harry Levin and are available through the archive of the Henry A. Murray Research Center of Radcliffe Institute for Advanced Study, Harvard University, 10 Garden Street, Cambridge, Massachusetts, 02138 [Producer and Distributor].

A. Data Sets and Variables

1. Patterns of Child Rearing - Sears, Maccoby and Levin 1951-1952

The Patterns of Child Rearing 1951-1952 data set contains interviews with 379 American, white mothers with one child in public kindergarten living in two suburbs of a large New England town, one chiefly working class, and the other middle class.

Descriptions of this data set depict all participants as stay-at-home mothers. Participants gave detailed information on the parenting of their children from birth through their kindergarten years. This data set is primarily concerned with general child rearing practices and values, but has useful information on *parenting cognitive development*. In addition to indicators of parental expectations and SES, one indicator from this 1951-52 data approximates the variables I use from the 1991-2001 NHES. It reads as follows:

- “Before child started kindergarten did you teach him [sic] reading words, writing the alphabet, drawing, telling time? Did you teach him anything else? How did you happen to teach him these things?” A five-point scale accompanied this question with 1 as ‘not at all’ and 5 as ‘considerable’

Parent educational aspirations for the child are captured in the question....

- “How far would you like him to go in school?” An eight-point scale accompanied this question with 1 as ‘grade school’ and 9 as ‘graduate school.’

The indicators of SES in the Patterns of Child Rearing data that I include here are family income and mother’s education coded as follows:

Mothers’ Education

- 1= college and graduate school
- 2=college graduate
- 3=some college

- 4=high school and vocational
- 5=completed high school
- 6=less than high school graduate²

Family Income

- 1=\$15,000 or more
- 2=\$10,000 –14,999
- 3=\$7,500-9,999
- 4=\$5,000-7,499
- 5=\$4,000-4,999
- 6=\$3,000-3,999
- 7=less than \$3,000³

Other appropriate variables I include are gender and number of siblings (see Appendix A for means, standard deviations and N).

2. The Detroit Area Study 1963 (DAS63)

The Detroit Area Study 1963 is a sample of families of 5th and 6th graders in the Detroit area. A total of 1536 families, primarily mothers, were interviewed for this study on family-school relationships. Respondents were asked to assess the neighborhood school, the child's performance in school and her personal contact with school officials.

The DAS63 contains a useful indicator of *parenting cognitive development* and it is similar to an indicator in the NHES. It reads as follows:

² The original data contained a 7th choice of 'grade school or less' but this category only contained 5 respondents. I combine it with a 'some high school' category and created a 'less than high school graduate' category.

³ The original data contain an 8th choice of 'less than \$2,000' but this category only contained 1 respondent. I combine it with a '\$2,000-\$2,999' category and created a 'less than \$3,000' category.

- “Before (child) was in school, how often did you (or your husband) read stories to him (her) from a book?” “Almost every day, once or twice a week, once or twice a month, a few times a year or less, never.”

Indicators of SES in the DAS63 that I use here include family income and mothers’ education coded as follows:

Mothers’ Education

- 1 = 0-4
- 2 = 5-8
- 3 = 9-11
- 4 = 12, High School Graduate
- 5 = 13-15
- 6 = 16+

Family Income

- 0 = < \$1,000
- 1 = \$1,000 – \$1,999
- 2 = \$2,000 – \$2,999
- 3 = \$3,000 – \$3,999
- 4 = \$4,000 – \$4,999
- 5 = \$5,000 – \$5,999
- 6 = \$6,000 – \$6,999
- 7 = \$7,000 – \$7,999
- 8 = \$8,000 – \$8,999
- 9 = \$9,000 – \$9,999

- 10 = \$10,000 – \$14,999
- 11 = \$15,000+

Other appropriate variables I include here are race/ethnicity, number of parents in household, number of siblings, mothers' employment status, age and gender (see Appendix B for means, standard deviations and N).

3. National Household Education Survey (NHES)

The National Household Education Surveys provide data that are well suited to addressing the level of participation in *parenting cognitive development* behaviors by parents at the end of the 20th century. Collected by the National Center for Education Statistics (NCES), the NHES data sets look at a wide range of education issues and they are the first large scale attempt by NCES to develop a household survey instead of school based data collection. And importantly, these surveys span a decade of increasing concern and programs about school readiness on the part of local and national policy-makers. NCES is mandated to collect and report information on the condition of education in the United States but it has primarily collected data from teachers, students, schools, school districts, and state education agencies; household data collection has been limited.

NHES was conducted in the spring of 1991, 1993, 1995, 1996, 1999, and 2001. Since I do not expect that changes in parenting cognition will significantly change across short times such as one year, I chose to use NHES91, NHES93, NHES96, NHES99, and NHES01 which allow for a two to three year period between each data collection. These data sets incorporate the identical questions and provide five time points across the ten-year period. NHES 1995 does not contain the identical questions. In fact, it included

only three of the six questions which I argue form the latent construct *parenting cognitive development* and in addition the response options are not identical. Preliminary analysis of frequencies of *parenting cognitive development* indicate small increases in these behaviors among parents that warrant this lag between data points to capture change.

These complex data sets screen a large number of households to gather background information and determine eligibility for participation in one or more of the components.⁴ Each survey has at least two components but I use only the parent interview component that contains information on early childhood education. I look specifically at the parents of children who are three through seven years old and in nursery school, kindergarten or the equivalent. Interviews were carried out with the parent or guardian most knowledgeable about the child's education. Table 3.1 provides general information on each of the data sets included here.

These data are drawn from nationally representative samples of non-institutionalized civilian households. The sample is drawn using random digit dialing (RDD). This procedure affords every residential telephone number a chance of being sampled through a random sampling mechanism. The Mitofsky and Waksberg (see Waksberg 1978) procedure yields a sample in which each household has an approximately equal probability of selection and also reduces the number of telephone calls that need to be made relative to previously used RDD procedures. A time saving variant of the basic Mitofsky-Waksberg referred as the "modified Waksberg procedure" was used in the NHES:91 and NHES:93 (see Brick and Waksberg 1991).⁵ This method

⁴ Component topics change with each survey.

⁵ The NHES:96, NHES:99 and NHES:01 used a slightly different approach to RDD sampling, called a list-assisted method (see Casady and Lepkowski 1993).

has several benefits including reducing the number of unproductive calls to nonworking or nonresidential numbers (compared with simple random sampling of all numbers), producing a self-weighting sample which is single stage and unclustered, and eliminating the sequential difficulties associated with the Mitofsky-Waksberg method.

The parent interview of young children in the NHES is designed to collect information on children's experiences in a number of settings, including their homes, childcare arrangements, early childhood education programs, and schools. In addition, the range of experiences covered in the survey includes cognitive, developmental, and entertainment activities. I am particularly interested in cognitive activities parents engage in with young children. Table 3.1 shows the targeted child age for each survey. My analysis sample includes only 3 years old through kindergarten.⁶

a. NHES: 91

About 60,000 households were screened for the NHES:91, which focused on early childhood education and adult education. I use the Early Childhood Education component that interviewed nearly 14,000 parents or guardians of 3 to 8 year olds. Issues investigated include participation in childcare and education as well as early school experiences. Family involvement in educational activities inside and outside the home is also included (see Appendix C for means, standard deviations and N).

b. NHES:93

The NHES:93 screened nearly 64,000 households and includes a School Readiness component and a School Safety and Discipline component. For the School Readiness component approximately 11,000 parents of 3 to 7 year olds participated in

⁶ NHES:01 does not contain information for kindergarten age children.

interviews. This survey concentrated on the developmental characteristics of preschoolers, school adjustment and teacher feedback to parents in the early grades, early school experiences, childcare participation, home activities with family members and health issues (see Appendix D for means, standard deviations and N).

c. NHES:96

Approximately 56,000 households were screened for the 1996 NHES which has a Parent/Family Involvement in Education component and a Civic Involvement component. Twentyone thousand parents of 3 year olds through 12th graders were interviewed on topics including children's educational experiences, parental involvement in education, school strategies for family inclusion, educational activities with family members and civic engagement (see Appendix E for means, standard deviations and N).

d. NHES:99

Nearly 60,000 households were screened for the 1999 NHES which has was a compilation of key items from previous NHES survey years, and included three interviews, the parent interview, the youth interview, and the adult education interview. The parent interview contains data on a variety of topics including early childhood program participation, types and frequency of family involvement in children's schooling, school practices to involve and support families, learning activities with children outside of school, and plans for their children's postsecondary education for children age birth to grade 12 (see Appendix F for means, standard deviations and N).

e. NHES:01

The NHES 2001 contains three surveys the Early Childhood Program Participation survey, Before- and After-School Programs and Activities survey, and Adult

Education and Lifelong Learning survey. The Early Childhood Program Participation survey gathered information on the nonparental care arrangements and educational programs of preschool children, including care by relatives, non-relatives, participation in day care centers and preschool programs including Head Start. This survey targeted children from birth through age 6 who were not yet enrolled in kindergarten (see Appendix G for means, standard deviations and N).⁷

I include the following items from NHES:

- A yes/no response to “In the past week has anyone in your family done the following things with (child)?: Told a story” and an additional opportunity to respond ‘1-2 times last week’ or ‘3 or more times last week.’
- A yes/no response to “In the past week has anyone in your family done the following things with (child)?: Taught letters, words, or numbers” and an additional opportunity to respond ‘1-2 times last week’ or ‘3 or more times last week.’
- A yes/no response to “In the past week has anyone in your family done the following things with (child)?: Taught songs or music” and an additional opportunity to respond ‘1-2 times last week or ‘3 or more times last week.’
- A yes/no response to “In the past week has anyone in your family done the following things with (child)?: Worked on arts and crafts” and an additional opportunity to respond ‘1-2 times last week’ or ‘3 or more times last week.’
- “How many times have you or someone in your family read to (child) last week? Would you say ... not at all, one or twice, 3 or more times or every day?”
- A yes/no response to “In the past month, have you or someone in your family visited a library with (child)?”

⁷ This dataset does not include kindergarten children. In each wave I control for age of child and school enrollment but to be certain no problems of comparison arise from this difference in data sets, I did an OLS regression for 1991, 1993, 1995 and 1999 which included a dummy variable for kindergarten children. This variable was not significant. I therefore retained the kindergarten children where possible because I feel including this information is important. The kindergarten year is quite different from other years of schooling. It is not required by law in all states and it is not full time formal schooling in all states. Historically, it is similar to preschool (see for example Beaty 1995, Rose 1999, Tyack & Cuban 1995).

As in Patterns of Childrearing 1951-52 and the Detroit Area Study 1963 data sets, the NHES also contains information of mothers' education, family resources, and other characteristics of the family. Response choices expanded some over the five NHES data sets that I analyze. To maintain uniformity across data sets, I recoded the variables into a standard format as follows:⁸

Mothers' Education:

- 0=Less than High School
- 1=High School Diploma or equivalent
- 2=Vocational School
- 3=Some College but less than a Bachelors
- 4=Bachelors Degree
- 5=Graduate School

⁸ Response categories in the NHES have changed over time for both mothers' education and household income. For example, by 1996 categories for '12th grade with no diploma' and 'vocational school with no diploma' were added. Also, 'Graduated School' was expanded to 'MA, MS', 'PhD/EDD', and 'Professional'. And finally, '1-2 years of college' and '3-4 years of college' were replaced by 'college with no degree.' In 1993, household income categories were broken down from '\$30,001-40,000' to '\$30,001-35,000' and '\$35,001-40,000.' They remained the same until 2001 when they were expanded to '\$40,001-45,000,' '\$45,001-50,000,' '\$50,001-60,000,' '\$60,001-75,000,' '\$75,001-100,000' and 'more than \$100,000.' To maintain uniform categories over the ten-year time span, I recode the variables as described above.

Family Income:

- 0=0 to \$10,000
- 1=10,001 to \$20,000
- 2=20,001 to \$30,000
- 3=30,001 to \$40,000
- 4=40,001 to \$50,000
- 5=50,001 to \$75,000
- 6=more than \$75,000

For the multivariate analyses income is recoded to 5,000, 15,000, 25,000, 35,000, 45,000, 62,500, and 85,000. The midpoints were taken because they are easier to interpret and it reduces the ceiling effect of income. These numbers were then converted into 1991 dollars to eliminate the effects of inflation. Finally, the log was taken because it tightens the distribution and decreases the influence of extreme values. Income was then centered.

Other variables about the family and child are included in the surveys that I use as control variables. They include:

- age of child with a possible response range of 3 to 7
- gender coded 0 = females and 1 = males
- minority status that for the purposes of analysis is turned into dummy variables of black, Hispanic, other with the excluded category being white.
- school enrollment coded 0=no and 1=yes enrolled in preschool or kindergarten
- number of siblings

- mothers' work status which was converted into dummy variables for part-time work, full time work and looking for work with the excluded category being stay at home mothers
- number of parents in the home which was converted into dummy variables of no parents in the household or one parent in the household with the excluded category being two parent households.
- year coded year-1991

4. Macro Enrollment and Demographic Data

Using the Current Population Survey, the Decennial Census, The Bureau of Labor Statistics, the National Center for Health Statistics, and Statistics of the United States, I create a data set for each decade of the 20th century. The data set includes demographic information and school enrollment information for the first year of each decade from 1900 to 2000 where available.

- Enrollment in Nursery School, 1964, 1970-2000
- Enrollment in Kindergarten, 1920-2000
- Enrollment in Elementary School 1900-2000
- Enrollment in High School 1900-2000
- Enrollment in College 1900-2000
- Median Female Age at First Marriage, 1900-2000
- Percent Married Women 16 years or older in the Labor Force 1900-2000
- Percent Total Families Headed by Females 1940-2000
- Total Fertility Rate 1900-2000
- Total Median Years of School Completed 1910-1990

- Male and Female Median Years of School Completed 1940-1990

B. *Indicators of Parenting Cognitive Development*

The five NHES data sets are nationally representative surveys that incorporate six identical indicators of parent behaviors with young children's cognitive development. Like the indicators used from the 1951-52 and 1963 data sets, these measure parent behavior with young children around cognitive activities that are central to school readiness and early school performance including early literacy and numeracy. The advantage of these indicators in the 1950s, 1960s, and the 1990s data sets is two fold.

First, they are skills that help children as they enter school and this is well documented in the child development literature. These indicators are also activities that are widely incorporated into early childhood education programs. The topics include reading to your child, visiting the library, teaching letters, words and numbers, telling stories, teaching songs and music and doing arts and crafts. Research shows reading to children builds better readers (Saracho 1997, Snow, Burns and Griffin 1998) as well as stimulating imagination, building vocabulary, and introducing the parts of story (Moss and Fawcett 1995). Visiting the library supports and reinforces reading activities and teaching letters, words and numbers is direct instruction in reading. Singing encourages phonological awareness (Bryant et al 1990, Maclean, Bryant and Bradley 1987) and encourages language and rhythm awareness (Moss and Fawcett 1995). Telling stories has been linked to better reading skills (Glazer 1989, Sonnenschein, Brody and Munsterman 1996) because it stimulates the imagination, builds vocabulary, and introduces the parts of story (Moss and Fawcett 1995). Doing arts and crafts activities

builds fine motor skills, and self-expression skills that are part of the early school years (Armistead 1996, Baker 1992).

Second, the indicators from the 1950s and 1960s, as well as the NHES data sets are self-reports of actual behaviors on the part of parents about cognitively based activities they participate in with their young child. They are not attitudes, which can have undesirable and vague demand characteristics associated with them.

II. Methods

A. The Long Historic Trend in Parenting Cognitive Development

Using Patterns of Child Rearing 1951-52 and the DAS63 as well as the NHES Surveys, I develop a rich descriptive picture of *parenting cognitive development* over the second half of the 20th century. I compare frequencies of parent reports of engagement in specific cognitive activities with young children. In particular, I look at direct instruction by parents to young children and reading to young children. These descriptive analyses establish the current status of *parenting cognitive development* predicted in Hypothesis One, its relationship to indicators of SES predicted in Hypothesis Two and the long historic trend predicted in Hypothesis Three.

B. Mothers' Education versus Family Resources and Parenting Cognitive Development Over Historical Time

Patterns of Child Rearing, DAS63, and NHES all include standard measures of family SES. I use these data sets to test Hypotheses Two and Four by comparing the relationship between mothers' education and *parenting cognitive development* with the relationship between household income and *parenting cognitive development*. The status

attainment literature has consistently shown that education achievement is intimately linked to family background (e.g. Blau and Duncan 1967). The parental involvement in schooling literature indicates that parent education is a more powerful indicator than occupation and that in particular, mothers' education is crucial (e.g. Lareau 1989). Here, I look directly at this issue. Mothers' education and household income are often used as indicators of family SES and are moderately correlated in these data sets. Table 3.2 displays these correlations by year. Household income represents resources available to the family but mothers' education represents the indirect impact of mass schooling on the family, particularly as it translates into the care of young children. Highly educated mothers are exposed to the importance of school achievement, schooling demands, knowledge about cognitive development, and new parenting ideas. Mothers, the usual early caregiver, channel their own education experiences into the family environment and hence throughout the population. I will model the relationship between *parenting cognitive development* and mothers' education and household income for 1951-52, 1963, 1991, and 2001 separately and compare the OLS regression coefficients for mothers' education and household income over time. The models read as follows:

$$Y = \beta_0 + \beta_1(\text{Income}_i) + \beta_2(\text{Momed}_i) + \dots + e_i$$

C. The Short Historical Trend in Parenting Cognitive Development

Using the NHES data from 1991 to 2001, I examine several hypotheses about short time trends and covariates of *parenting cognitive development* over the 1991 to

2001 decade. To do this I combine all five NHES surveys into one data set. With these data, three models are estimated by different techniques to gain insight into recent *parenting cognitive development*. These models test the same hypotheses, but each estimates coefficients with contrasting assumptions about the measurement of the dependent variable.

Individual Behaviors or Underlying Construct Parenting Cognitive Development?

The six items about parents' activities towards improving their young children's cognitive development represent the main behaviors widely discussed in the literature on child development and school readiness. There are two ways to conceptualize the analyses of these items. One is to assume that they represent individual behaviors that influence different aspects of cognition as reviewed in the literature above. Therefore they would be analyzed separately and results could be compared across analyses.

The second way is to assume that these behaviors represent an underlying construct that I call *parenting cognitive development*. To examine grouping these variables together as a construct, I did a confirmatory factor analysis using all five waves of the NHES combine into one data set.⁹ I hypothesize that all six variables will load on one factor which I call *parenting cognitive development*. Preliminary analyses of the data deemed factor analysis appropriate. All six variables correlate fairly well with all others and none of the correlation coefficients are particularly large (see Appendix H - M for interitem correlations). The KMO statistic is considered 'good' at .74 (Kaiser 1974). In addition, all elements on the diagonal of the anti-image correlation are well above .5 and all of the off diagonal elements are small. Barlett's Test is significant at the .001 level.

⁹ Similar results were obtained doing separate factor analyses for each wave.

Using Principal Factor Analysis (PFA), I identify one factor including all six items.¹⁰ PFA represents the common variance of variables and extracted commonalities show low commonality and factor loading for the library item, so I give this variable extra consideration before deciding to retain it.¹¹ First I examine the PFA factor loadings when library is dropped from the analysis. These change little. Next, I look at the percent of variance explained, and this increases from 23 percent to 26 percent, but this is only modest. Next a Cronbach's alpha was performed. An alpha of .57 was obtained and, although slightly low, determined sufficient. In addition, the elimination of a single item did not sufficiently improve the latent construct.¹² Therefore I decide to retain library because I believe it theoretically adds to the latent construct *parenting cognitive development*.¹³

Table 3.3 displays the factor loadings, eigenvalue and variance explained by the single factor extracted. The factor explains 22.738 percent of the total variance. Since there is a case to be made for both approaches to the dependent variable—separate behaviors or single construct—I estimate models using both and compare the results. To foreshadow the results some, it turns out that both approaches yield the same substantive results and conclusions but the library indicator continues to behave slightly differently than the other five indicators.

¹⁰ Using a Scree Plot, one clear factor emerges (Cattell 1966). In addition, Eigenvalues exceed one for only one factor (Kaiser 1960).

¹¹ Interpretation of factor loadings is purely arbitrary but .3 is a common cut off and the loading for library is only .27. Meaning for factor loadings' magnitudes vary and library is a dichotomous variable, therefore loadings are expected to be lower. By Norman and Streiner's (1994) rule, a factor loading for a sample size this large need only be approximately .032.

¹² Cronbach's Alpha for the undichotomized scale is higher (.64).

¹³ Similar results were obtained in a Cronbach's Alpha analysis where library was retained because its elimination did not sufficiently improve the construct.

First I develop an OLS regression model. This assumes the least about the NHES data and the effects of time. The regression model uses a composite scale of *parenting cognitive development* that has a range of 0 to 12. Total possible responses for each dependent variable were added up where the possible responses were 0-3 for reading last week, 0-2 for teaching letter, words or number, doing music activities, telling a story, or doing arts and crafts and 0-1 for visiting the library (see Table 3.4 for details). This model has the advantage of using the full scope of each indicator in the dependent scale. The reduced models are as follows:

$$Y = \beta_0 + \beta_1(\text{Income}_i) + \dots + e_i$$

$$Y = \beta_0 + \beta_1(\text{Income}_i) + \beta_2(\text{Momed}_i) + \dots + e_i$$

$$Y = \beta_0 + \beta_1(\text{YEAR}_i) + \dots + e_i$$

The logistic model predicts the probability of each dependent dichotomous variable (Read, LWN, Music, Story, Craft, Library) occurring separately over time. Logistic Regression requires me to dichotomize the dependent variables. I dichotomized Story, Music, LWN and Craft variables at ‘not at all’ and ‘1 to 2 times last week’ or ‘three or more times last week.’ Read is dichotomized at ‘not at all’, ‘1 to 2 times last week’ and ‘three or more times last week’ or ‘everyday.’ Table 3.4 depicts the dichotomization of each variable. The Logistic Regression model allows me to examine each of the parent behaviors separately. Each model reads as follows:

$$P(Y) = \frac{1}{1 + e^{-z}}$$

$$Z = b_0 + b_1 (\text{YEAR}_1) + \dots + e_i$$

Finally, I develop a latent variable model using a Hierarchical Logistic Regression Model because this allows me to test hypotheses two, three and four with a single model. The model assumes that six items measure a latent construct *parenting cognitive development*. The value of the latent construct is allowed to vary across people. This can be written as a two level hierarchical model, where items (indexed by i) are nested within persons (indexed by j).

$$\eta_{ij} = \ln(p_{ij}/(1 - p_{ij})) = \alpha_{1j} + \alpha_{2j}D2_j + \alpha_{3j}D3_j + \alpha_{4j}D4_j + \alpha_{5j}D5_j + \alpha_{6j}D6_j$$

$$\begin{aligned} \alpha_{1j} = & \beta_{10} + \beta_{11}(\text{YEAR}_j - 1991) + \beta_{12}(\text{Household Income}_j) + \\ & \beta_{13}(\text{Household Income}_j) * (\text{YEAR}_j - 1991) + \beta_{14}(\text{Mothers' Education}_j) + \\ & \beta_{15}(\text{Mothers' Education}_j) * (\text{YEAR}_j - 1991) + r_{1j} \end{aligned}$$

$$\alpha_{ij} = \alpha_i, i=2, \dots, 6$$

Here η_{ij} is the log-odds of the latent construct *parenting cognitive development* for person j . β_{10} is the intercept and β_{11} , β_{12} , and β_{13} are slopes. The intercept, β_{10} , is the expected latent construct *parenting cognitive development* for a parent whose SES is 0

and who was surveyed in 1991. The slope β_{11} is the estimated rate of change in the latent construct *parenting cognitive development* over time. The slope β_{12} is the expected difference in the latent construct *parenting cognitive development* associated with a one-unit difference in household income and the slope β_{13} gives an estimate of the rate at which the relationship between household income and *parenting cognitive development* changes over time. The slope β_{14} is the expected difference in the latent construct *parenting cognitive development* associated with a one-unit difference in mothers' education and the slope β_{15} gives an estimate of the rate at which the relationship between mother's education and *parenting cognitive development* changes over time. The error term, r_{1j} , represents a unique effect associated with person.

Like the Logistic Regression, this type of Hierarchical Logistic Model requires me to dichotomize the dependent variables. Again, Table 3.4 shows the coding scheme. The dichotomizing cut off decisions are based on the distributions of the dependent variables. They provide reasonable distributions such that in some instances approximately 50% percent of the population fall above and below the cut off of three or more times per week. However, it also gives me instances where higher percentages fall either above or below the cut off mark. This in effect provides normal distribution of the frequency distributions.

Prior research shows demographic and family background variables have an impact on parent behaviors with their children therefore the OLS, logistic and hierarchical logistic regressions all include control variables in the final models. These variables include number of siblings, mothers' employment, number of parents in the

household, child's age, child's gender, child's race/ethnicity, and school enrollment.

These research literatures are discussed at length in Chapter 7.

Table 3.1: Data Sets Included and Attributes

<u>Dataset</u>	<u>Year</u>	<u>Component Used</u>	<u>Households Screened</u>	<u>Respondent</u>	<u>Child Age</u>	<u>Children w/in Component</u>
Patterns in Childrearing	1951-52	NA	NA	Mother	5yr (kindergarten)	379
Detroit Area Study	1963	NA	NA	Primarily Mother	5 th or 6 th grade	1,536
NHES	1991	Early Childhood Education Survey	60,314	Parent/Guardian*	3-8	13,892 (7655)
NHES	1993	School Readiness Survey	63,844	Parent/Guardian*	3-7	10,888 (6593)
NHES	1996	Parent/Family Involvement in Education	55,838	Parent/Guardian*	3yr – 12 th grade	20,792 (4421)
NHES	1999	Parent Interview	57,278	Parent/Guardian*	birth – 12 th grade	24,600 (5041)
NHES	2001	Early Childhood Program Participation	48,385	Parent/Guardian	birth – 6 years	6,749 (3150)

*Individual most knowledgeable about the child's education

Table 3.2: Correlation Coefficients of Mothers' Education by Household Income

1951	.506** (368)
1963	.353** (1521)
1991	.47** (7460)
1993	.488** (6449)
1996	.492** (4276)
1999	.487** (4883)
2001	.488** (3084)

**Correlation is significant at the .01 level

Source: Patterns of Child Rearing, Sears, Maccoby, and Levin, 1951-52
Detroit Area Study, Litwak and Meyer, 1963
National Household Education Survey, National Center for Education Statistics, 1991
National Household Education Survey, National Center for Education Statistics, 1993
National Household Education Survey, National Center for Education Statistics, 1996
National Household Education Survey, National Center for Education Statistics, 1999
National Household Education Survey, National Center for Education Statistics, 2001

Table 3.3: Factor Loadings for the Derived Factor from a Principal Axis Factoring of the Six Indicators of *Parenting Cognitive Development*, 1991-2001 Combine

<u>Variable</u>	<u>Factor Loading</u>	<u>Eigenvalue</u>	<u>Percent of Variance</u>
Read to child last week	.605	1.364	22.738
Taught child letters, words, numbers	.420		
Taught child songs/music in last week	.442		
Told child a story in last week	.553		
Arts and crafts with child in last week	.500		
Dichotomous Visit Library	.267		

Source: National Household Education Survey, National Center for Education Statistics, 1991
 National Household Education Survey, National Center for Education Statistics, 1993
 National Household Education Survey, National Center for Education Statistics, 1996
 National Household Education Survey, National Center for Education Statistics, 1999
 National Household Education Survey, National Center for Education Statistics, 2001

Table 3.4: Coding Scheme by Regression Type for the Dependent Variables

	<u>OLS</u>	<u>Logistic</u>	<u>HLM</u>
<u>Story, LWN, Music, Craft</u>			
No	0	0	0
Yes/1-2 times per week	1	0	0
Yes/3 or more times per week	2	1	1
<u>Read</u>			
No	0	0	0
Yes/1-2 times per week	1	0	0
Yes/3 or more times per week	2	0	0
Yes/Everyday	3	1	1
<u>Library</u>			
No	0	0	0
Yes	1	1	1

Chapter 4

Parenting Cognitive Development at the Turn of the 21st Century

This chapter establishes the current state of *parenting cognitive development*. First I briefly review the parental involvement literature. This literature is essential to my discussion of *parenting cognitive development* because it is the most common way in which researchers demonstrate how parents create advantage for their children through schooling. Next I document two distinct public movements -- parental involvement in schooling and the school readiness campaign-- in the U.S. that have helped to spread this role to the entire population of parents. This leads to a hypothesis about the pervasiveness of *parenting cognitive development*. The data used to test this hypothesis strongly supports the contention that *parenting cognitive development* among American families of young children has reached near normative proportions by 2001. Finally, I demonstrate the effects of household income and mothers' education on *parenting cognitive development* in the year 2001.

Parental Involvement in Schooling

Parental involvement in schooling represents a major vehicle that researchers have identified in which parents create advantage for their children. Differences in home-school relationships have emerged as a significant topic of study especially in the last two decades, even though attempts to foster a relationship between home and school date back to the early part of the 20th century. The movement for progressive education in this country began as an effort between parents and teachers and as early as the late 1920s and

early 1930s progressives were touting the value of a successful home school relationship. Researchers like Baldwin and Osborne (1935) described various forms of partnership between home and school with hopes of improving the connection.

Fifty years ago Anna Freud (1952) stated in a public address that the schools' expanded domains then included the notion that teachers should be "mother-substitutes." Instead, she argued that playing the part of the mother elicits mother-child reactions inappropriate for the school setting; children want to be loved by their mother, Freud argued, not taught. Since that lecture, many researchers have investigated interpretations by parents and school personnel on the home-school relationship and the role of parents in the education process. Parental involvement in schooling in various forms including help with homework, volunteering in school, attending school events, and discussing school with children has been linked to SES as measured by parents' education (Crosnoe 2001) or more specifically mothers' education (Stevenson and Baker 1987), fathers' occupation and household income (Baker and Stevenson 1986, Lareau 1989), school type as measured by the finishing degree obtained (Oswald, Baker and Stevenson 1988), student achievement (Ho and Willms 1996) and track placement (Useem 1992). Research on parental involvement in schooling has grown rapidly, motivated by the belief that parents play an important part in the education process. Indeed, although there is wide agreement that parents are an important component in facilitating education, there is some debate about what parents actually do that makes a difference.

Early work in this field focused on communication between school and home. For example, in *Worlds Apart* Sarah Lawrence Lightfoot explored family-school interaction. Although she acknowledges the importance of the boundaries Anna Freud

describes, Lightfoot argues that bridges between these two fundamental spheres of socialization are crucial and often neglected (Lightfoot 1978). A decade later Annette Lareau argued inter-institutional links between school, home and work are an important vehicle for success (Lareau 1989) because the institutional standards, in this case expectations of parental involvement, have an impact on individual success (Bourdieu and Passeron 1977).

Some current research on parental involvement suggests it enhances academic achievement (Epstein 1991, Muller 1993, Stevenson and Baker 1987) and implies a child's school success is partially dependent on a high degree on parental involvement. In *Home Advantage* (1989), Lareau demonstrates the advantages of what she termed a "two person single education career" in contrast to a "single person education career" where success is solely based on individual effort and intelligence. The addition of a second person to guide and supervise a school career creates a customized experience that enhances the school experience of children. This additional person, usually a mother, provides an advantage for some children by navigating the child through the education system. For Lareau, this additional person provides help with homework, additional resources (e.g. tutors), and information about schooling obtained from volunteering and social networks. Lareau shows middle and upper-middle class parents are more likely to use this strategy. In addition, she shows that this inter-institutional link between family and school is expected (read socially constructed) in modern education and the model has become so salient many social programs attempt to employ it (read institutionalized). For example, although there is reasonable evidence to suggest social programs are most beneficial when targeted at the population for which there is a desired

result (St. Pierre et al. 1995), two-generation programs and the parent component of programs like Head Start often attempt to draw parents in although the cost effectiveness is debatable.

Oswald, Baker, and Stevenson (1988) find parental involvement is shaped by institutional characteristics of schooling; differences in institutional arrangements across school systems produce different patterns of parental behavior toward their children's school careers. Specifically, they find German parents whose children attend the traditional forms of German high school with designated finishing degrees are less likely to manage the school careers of their children than parents whose children attend the newer comprehensive high school where one of three possible degrees may be obtained. These parents of the comprehensive high school students were in contact with teachers, helped with homework and discussed course selection with their children. Degree of involvement, Oswald, Stevenson and Baker conclude, is partially contingent on the type of charter possessed by the school (Meyer 1970).

Additional research in parental involvement in children's schooling suggests that the relationship of involvement to achievement changes over time and with the age of the child. Muller (1998) shows that parental involvement in students' mathematics achievement diminishes over the high school years so that by the end of high school it has no relationship to achievement gains. However, this decrease in parental involvement is not the case for all students. Crosnoe (2001) shows that parents of the college preparatory track students begin high school with the highest involvement but show the sharpest declines over time. In addition, parents of the highest achieving college preparatory students reduce involvement the most. For remedial track students,

white parents are more likely to maintain a constant level of parental involvement through the high school years while minority parents are more likely to diminish their level of involvement. Additionally, McNeal (1999) argues parental involvement has a greater impact on behavior than achievement and shows even this relationship evaporates for all but white middle and upper SES students.

The several studies I have reviewed make a strong case that parental involvement in children's schooling, both in terms of guidance and cognitive tasks, can have an important impact on children's school success. These studies primarily focus on individual benefits of parental involvement; parental involvement as a micro level process can result in advantage for those children whose parents partake. Two scenarios emerge from this literature. The first scenario is parental involvement as status competition for more and better schooling. Collins (1978) demonstrated this notion of status competition with years of schooling; elite classes get more and more schooling to maintain an advantage over working classes as the general population stays in school longer. Similar arguments can be applied to parental involvement; middle class parents find new and additional ways to participate in the education of their children. As parental involvement in schooling becomes more common, middle class parents find additional ways to create advantage for their children. The second scenario is parental involvement as cultural capital (Lareau 1989); schools as middle class institutions, promote a middle class understanding of the role of parents in education. Middle class parents are likely to be involved in their children's schooling and since teachers occupy the middle class, they reward their notions of the appropriate role of parents in education.

Although the scenarios have different theoretical implications, both describe a plausible process by which *parenting cognitive development* might increase and become more common over time. The status competition scenario suggests one of two events; that middle class parents would spend more and more hours per day engaging in cognitive activities with their young children as working class parents increase their engagement or that middle class parents would abandon *parenting cognitive development* altogether as new vehicles to create advantage emerge. Likewise, the cultural capital scenario suggests that working class parents feel so alienated from the schooling process, engagement in cognitive activities with their young child is unlikely and therefore *parenting cognitive development* remains the domain of middle class parents. Clearly elements of both theories operate in schooling; it is possible to conceive of middle class parents increasing the amount of time they spend in *parenting cognitive development* as working class parents acquire the behavior or for the behavior to spread throughout the middle class population but remain middle class behavior. But each of these plausible processes addresses only the vehicle by which *parenting cognitive development* spreads through a population; a broader view addresses its normative nature.

Parental Involvement as a widely accepted virtue that is publicly promoted

Researchers have shown that many parents believe parental involvement in schooling creates advantages for their children, and there appears to be real payoff from involvement. But what social forces help to construct the idea of *parenting cognitive development* both in terms of guidance and cognitive demands? Both the campaign for

parental involvement in schooling and the school readiness campaign have placed cognitive development at the forefront of parenting concerns.

In the American system of education parental involvement has become a publicly promoted cause. Governments, schools, and the media all herald the virtues of the involved parent in their child's schooling. These messages filter throughout the populations of parents. For instance, federal policies like the *Goals 2000* legislation have made school strategies to involve parents a voluntary goal for all schools; "by the year 2000, every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional and academic growth of children." Local schools themselves also promote and even educate parents about how to be involved in the schooling and cognitive performance of children. Recent research identifies eight strategies schools were using in the 1980s to incorporate parents in the education process. They include providing parents with information about child development, school performance, group placement, overall performance on tests, home learning, and community services as well as providing volunteering opportunities for parents and including parents in school decisions (Epstein 1992). However, analyses show that parents and school personnel differ in their perceptions about the extent of efforts by schools to promote parental involvement. Although schools reported using various strategies to include parents in the education process, parents were less apt to acknowledge these efforts suggesting that some parents were unaware of attempts by the school to include them (US Department of Education 2001). This is highlighted by parent ratings of school practices done "very well" in the NHES:96. Parents' rated more school practices done "very well" in private schools than public schools, smaller schools

than larger schools, with less than a high school diploma than a high school diploma or more, with children in lower grades than higher grades, and parents of Hispanic or black children than other racial or ethnic groups (U.S. Department of Education 1997).

Evidence of a broader promotion of parental involvement in schooling by schools and policy makers suggests it has become an institutionalized function of schools in the U.S. The parental involvement movement and much of the accompanying research literature addresses school age children, but I am particularly interested in young children age three through kindergarten, and here too is evidence of a public construction of parenting that focuses on preparing the young child for school.

School Readiness for Young Children

Another process that adds to the increase in *parenting cognitive development* reaches families even before formal schooling begins. Like parental involvement, public policy has addressed school readiness and in this context, school readiness takes on a decisively cognitive form, such as reading readiness and early numeracy, that has intensified in recent times. Since the early 1990s, public policy has targeted families and their role in getting children cognitively ready for schooling. Although school readiness is currently a public issue, I show in later chapters that this is part of a more long-term institutional process that has its roots in the expanding power of schooling even before it became an overt government concern. School personnel, policy makers and researchers see parents as one important vehicle for promoting school readiness and therefore policy has attempted to encourage parent behaviors aimed at school readiness. For example,

school readiness is the first goal in *Goals 2000*.¹⁴ Objective Two of Goal One reads “Every parent in the U.S. will be a child’s first teacher and devote time each day to helping such parents’ preschool child learn, and parents will have access to the training and support parents need (103 Congress 1994).” But recent initiatives have gone further than posing school readiness as a goal; they have provided parents with guidelines for the preparation of their children for entering school through the pursuit of cognitive development. The *America Reads Challenge*, for instance, promulgated by President Clinton made ‘Ready, Set, Read’ activity kits available to all families and caregivers of children age five and under (Koralek, Collins and McLeod 1997). And, the current administration will distribute guidebooks for parents and families such as *Helping Your PreSchool Child* that include recommendations for encouraging cognitive development in young children (U.S. Department of Education 1993, 2002). Yet we know little about the effects of such policy efforts on school readiness among America’s young children.

Emerging literature from the *Early Childhood Longitudinal Study – Kindergarten* show that children who start kindergarten with greater cognitive knowledge and skills, who are read to frequently and who have more positive approaches to learning have an academic advantage over children who do not start kindergarten with these resources (U.S. Department of Education 2002). Yet we have only a sketchy picture of what kinds of cognitive and school readiness activities parents do with young children or what proportion of parents is engaging in these activities at the turn of the 21st century. The term ‘school readiness’ is used frequently by policy makers and educators alike but what

¹⁴ *Goals 2000: Educate America Act* became law in 1994. It is a long term, broad based reform initiative to improve American education by setting clear and rigorous standards for what every child should know.

types of activities are parents engaging in and what proportion of parents partake in these activities?

- *Hypothesis 1: At the turn of the 21st century, a substantial proportion of U.S. parents routinely engage in parenting cognitive development with their young children.*

Parenting cognitive development in young children is currently a pervasive activity undertaken by most parents. Figure 4.1 illustrates the extensive amount of time parents currently spend engaging young children in cognitive activities. Frequencies from the NHES:01 show nearly 100% of parents read to their young child at least once last week and 94% taught them letters, words or numbers at least once last week. In fact, for each of the five activities about 80% or more of parents report doing them at least once last week.

Table 4.1 gives the frequencies and percentages for Figure 4.1 but breaks them down into ‘once or twice per week’ and ‘three or more times per week.’ Most notably, more than 84% of parents report reading to their child three or more times last week and more than 74% of parents report having taught letters, words and numbers three or more times last week. In each instance 45% to 84% of the parents report having engaged their young children three or more times last week. This evidence makes it abundantly clear that contemporary parents spend a considerable amount of time engaging their young children in cognitive activities.

The near universal pursuit of these activities by parents with their young children are aimed at strengthening their cognitive skills assumed to be needed for success in

school and they represent the normative end point of the historical construction of parenting that has evolved through the last century. They represent, I argue, the culmination of an historical trend that through the last fifty years has resulted in a significant addition to the parenting role in modern society.

Indicators of SES and their Relationship to *Parenting Cognitive Development* in 2001

The second major question of this dissertation (to be addressed in Chapter 6) is the historical trend in differences between socio-economic groups in levels of *parenting cognitive development* in young children. Here, I present the data from 2001 because it is the endpoint of my historical evidence. Figure 4.1 and Table 4.1 indicate that by 2001 a large percentage of parents reported having participated in cognitive activities with their young children. Yet the parental involvement research literature shows that middle to upper middle class parents are more likely to be involved in the schooling process than working class parents (e.g. Lareau 1989). I investigate differences by socio-economic status in *parenting cognitive development*.

Two components of a family's socio-economic position are family income and mothers' education. Often these are used in tandem as an overall indicator of SES. Here, I pay particular attention to the relationship of each independently with *parenting cognitive development* because they originate from two processes, one economic the other educational. Mothers' education is a good indicator of the impact of mass schooling on child rearing practices. Increasingly larger proportions of the population went to school and stayed in school longer over the 20th century. As women obtained more education in absolute terms, the institutional norms in the meaning around

childhood were more readily incorporated into parenting. Family income, on the other hand, is a direct indicator of family resources that can be brought to bear on child rearing. Income can be used for the purchase of various cognition enhancing supplements such as educational supplies, specialists, and tutors. The correlation between the two measures is .49 in the 2001 data; hence while the two indicators are associated as they should be, jointly they share only 25% of the variance between families and thus independently measure characteristics.

I explore the relative impact of each of these components on the *parenting of cognitive development* in 2001. Previous literature indicates that differences exist in parental involvement in schooling for school age children but are these patterns also reflected in parental pursuit of cognitive development of young children?

- *Hypothesis 2a: At the turn of the 21st century, U.S. families with more income are more likely to engage in parenting cognitive development than families with less income.*
- *Hypothesis 2b: At the turn of the 21st century, U.S. families with higher levels of maternal education are more likely to engage in parenting cognitive development than families with lower levels of maternal education.*
- *Hypothesis 2c: At the turn of the 21st century, the effect of mothers' education will be greater than the effect of household income on the likelihood of parenting cognitive development.*

In 2001 there is a relationship between household income and indicators of *parenting cognitive development* but the relationship is not nearly as dramatic as might be expected given the results in the parental involvement literature (I review this literature more extensively in Chapter 6 when I consider SES differences in *parenting cognitive development* in more detail). Figure 4.2 indicates the differences by household income quartile; frequencies and percentages are located in Table 4.2. I use quartiles with the middle categories combined here and elsewhere to reduce the number of income categories and make historical time points more comparable as well as maintain consistency with other National Center for Education Statistics data used later in this dissertation. This figure uses three indicators from the *parenting cognitive development* construct, visiting the library, reading to your child everyday, and teaching letters, words and numbers three or more times last week. I use these three because they are most traditional measures of parent engagement in cognitive development. Figure 4.2 illustrates differences between quartiles using the maximum possible frequency only, so for example, only parents reading everyday or teaching letters, words and numbers three or more times last week.

The results in Figure 4.2 are evident. In each instance the top quartile is more likely to participate than the middle two quartiles and the middle two quartiles are more likely to participate than the lower quartile. For example, 46% of the upper 25% category responded yes to visiting the library monthly, 37% of the middle 50% and 27% of the lower 25% category. Percentages for reading everyday last week are 69%, 58%, and 47% respectively. Interestingly, a very high proportion of respondents in all three categories report teaching letters, words or numbers at least 3 times last week. These

percentages are 77%, 74%, and 72% respectively, or in substance almost no difference among income groups.

Figure 4.3 and Table 4.3 depict the responses to the identical questions but by mothers' education. Again, the least variation between levels exists in teaching letters, words and numbers where a high proportion of all parents report engaging in this activity at least three times last week. The responses to visiting the library last month and reading everyday last week show significantly larger gap between the lowest category, less than a high school diploma, and the highest category, graduate school. For example, 24% of mothers with less than a high school diploma report visiting the library last month as compared to 54% of mothers with at least some graduate school. Percentages for reading everyday last week are 43% and 74% respectively.

A test of two variations on hypothesis 2 is made by estimating the main effects of mothers' education and household income on the scale of *parenting cognitive development*. Recall that the scale of *parenting cognitive development* is the composite that includes all six discrete dependent variables. The estimates are made controlling for several theoretically appropriate demographic variables, including number of siblings, mothers' labor force participation, number of parents in the household, and child's age, gender, race/ethnicity, and school enrollment. Bivariate correlations between household income and mothers' education, and the scale of *parenting cognitive development* are .169 and .211 respectively. Both are significant at the .01 level.

Table 4.4 shows OLS estimates for the regression of the *parenting cognitive development* scale on mothers' education and family income.¹⁵ Model 1 includes the OLS estimates for the regression of *parenting cognitive development* on household income. Household income is entered first because it is a common indicator of SES and one I wish to contrast with mothers' education. Therefore, it is entered first to emphasize its sole impact on *parenting cognitive development* as well as its impact relative to mothers' education. Household income is significant and the adjusted R^2 is .019 indicating that less than 2% of the variation in *parenting cognitive development* scale is explained by household income. Model 2 introduces mothers' education in addition to household income, and two important results occur. First, household income is only significant at the .05 level once mothers' education is added to the model. And second, mothers' education and has a significant, positive and much larger effect on *parenting cognitive development*. Compared to household income alone, together mothers' education and household income account for two and one half times more of the variation in *parenting cognitive development*.

In Model 3 a series of demographic characteristics of the family and parents are added to see if mothers' education continues to predict *parenting cognitive development*. Model 3 shows that family income becomes insignificant with the addition of number of siblings, child's gender, age and race/ethnicity, mothers' work status, number of parents in the household and school enrollment. The effect of mothers' education remains significant but the size of the effect is modest (the implications of the mothers' education

¹⁵ Tests of colinearity show no appearance of multicollinearity since the VIF are all much less than 10. Residuals are approximately normally distributed and standardized residuals for the scale of *parenting cognitive development* show approximately constant variance.

effect and alternative demographic explanations are developed more in Chapter 7). The modest effect size of mothers' education means that for example increasing four categories in the mothers' education scale, or from 'less than a high school diploma' to 'some college or an associate's degree', yields only a one-unit increase in the *parenting cognitive development* scale. Finally, less than 8% of the variation in *parenting cognitive development* is explained by Model 3.

These results show that in 2001 traditional measures of SES explain only a small portion of the variation in *parenting cognitive development*. These are curious results given the majority of the findings in the research literature on parental involvement in schooling. The descriptive evidence presented in this chapter showed two things. First, a large proportion of all parents are engaging in *parenting cognitive development* by the turn of the 21st century. This suggests that as normative behavior, there may not be much variation in *parenting cognitive development* left to systematically explain. Second, there is a relationship between *parenting cognitive development* and household income, and *parenting cognitive development* and mothers' education. However, once we control for demographic and family background characteristics in the multivariate analyses, the significance of the relationship between household income and *parenting cognitive development* disappears. It is the relationship between mothers' education and *parenting cognitive development* that remains significant and positive.

Conclusions about *parenting cognitive development* at the turn of the 21st century

By 2001, *parenting cognitive development* of young children had become a normative part of parenthood. Schooling makes cognitive performance essential and an

unavoidable task to gain increasingly more important educational credentials. There are clear logics for why parents now regularly engage in behavior directed at enhancing their young child's cognitive development. Both theories of educational status competition and cultural capital suggest reasons for linking *parenting cognitive development* and drives for social mobility and adult status. At the same time, in the past decade there have been several high profile public movements orienting parents towards the value of education and the importance of doing cognitive tasks with young children to enhance their school readiness. The descriptive statistics for 2001 suggest the impact of social forces centered on schooling have influenced parenting in U.S. It is the rare parent who does not engage in any of these activities. Chapter 5 shows this was not always the case.

The analysis comparing the effects of household income with mothers' education established two other conclusions about the normative state of *parenting cognitive development* as we entered the 21st century. First, the evidence suggests a driving force behind this normative behavior has been the successive rise in education of the American mother. It should also be noted that, for example, mothers with less than a high school diploma in 2001 constitute only 16% of the total. Meaning that by 2001 the average mother had some higher education with all of the assumed sensitivity and increased parenting skills and motivation aimed at schooling, cognitive development, and modern ideas about mothering that would go along with this. Second, as predicted, although *parenting cognitive development* is normative behavior by 2001, mothers' education is a predictor but household income is not. This suggests that the driving force of *parenting cognitive development* has been the education of mothers not family SES in the economic

sense. Chapter 6 further examines the effects of household income and mothers' education both over the long historical period and the ten year span from 1991 to 2001.

In 2001 the largest category of mothers had some post secondary education. These mothers were most likely to respond they had read to their child everyday last week, taught letters, word and numbers with their young child, taught music and songs to their young child, did arts and crafts with their young child and told their young child a story three or more times last week. Chapters 5, 6, and 7 explore the historical trends and causal mechanisms behind this phenomenon and what it says about the social construction of childhood and parenting perspectives.

Table 4.1: Frequencies and Percentages for *Parenting Cognitive Development* Indicators, 2001 (N=3907)

<u>Frequency</u>	<u>Parenting Cognitive Development Indicators</u>					
	<u>Read</u>	<u>LWN</u>	<u>Music</u>	<u>Story</u>	<u>Craft</u>	<u>Library</u>
Not at all	2.5 (99)	5.9 (232)	18.8 (736)	16.5 (644)	20.6 (803)	NA
1-2 times/week	13.3 (521)	19.8 (772)	27 (1055)	29.9 (1139)	34 (1327)	NA
3 or more times/week	26.6 (1041)	74.3 (2903)	54.2 (2116)	54.3 (2123)	45.5 (1776)	NA
Everyday	57.5 (2246)	NA	NA	NA	NA	NA
No	NA	NA	NA	NA	NA	63.8 (2494)
Yes	NA	NA	NA	NA	NA	36.2 (1412)

Source: The National Household Education Survey, National Center for Education Statistics, 2001

Table 4.2: Frequencies and Percentages of Parent Reports of Cognitive Activities with Young Children by Income Category, 2001 (N=3907)

<u>Quartile</u>	<u>Cognitive Activities</u>		
	<u>Library Last Month</u>	<u>Read Everyday</u>	<u>LWN 3+</u>
Lower 25%	26.9 (259)	47 (452)	71.6 (689)
Middle 50%	36.5 (776)	57.9 (1231)	74.4 (1582)
Upper 25%	46 (377)	68.7 (563)	77.2 (632)

Source: The National Household Education Survey, National Center for Education Statistics, 2001

Table 4.3: Frequencies and Percentages of Parent Reports of Cognitive Activities with Young Children by Mothers' Education, 2001 (N=3815)

<u>Mothers' Education</u>	<u>Cognitive Activities</u>		
	<u>Library Last Month</u>	<u>Read Everyday</u>	<u>LWN 3+</u>
LT HS	23.7 (142)	42.6 (255)	68.7 (412)
HS Diploma or Equivalent	30.2 (329)	49.6 (541)	72.8 (794)
Vocational or Technical School after HS	35 (43)	51.2 (63)	74 (91)
Some College or AA	39.8 (390)	61.1 (598)	76.4 (748)
Bachelor's Degree	45 (291)	71.8 (464)	75.4 (487)
Graduate School	54.1 (204)	73.9 (278)	80.1 (302)

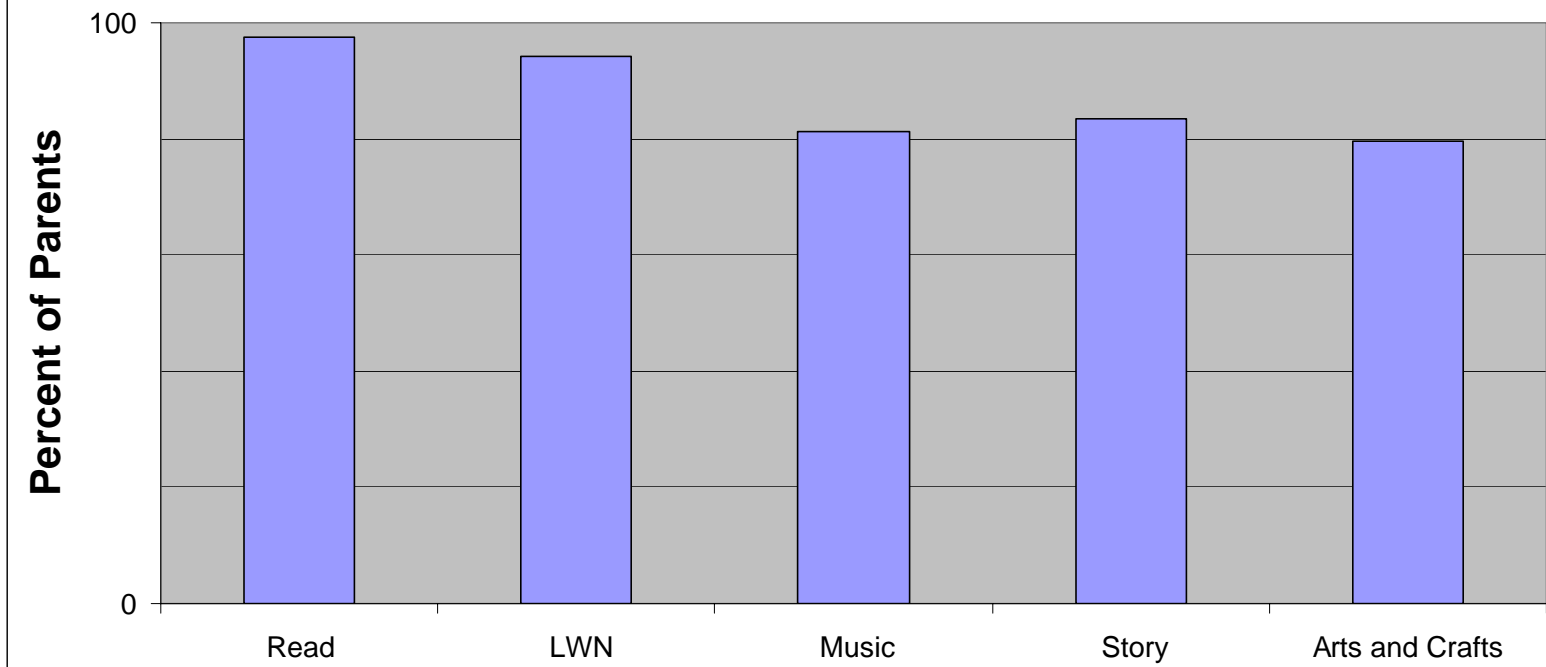
Source: The National Household Education Survey, National Center for Education Statistics, 2001

Table 4.4: OLS Regression Estimates of the Scale of *Parenting Cognitive Development* on Household Income and Mothers' Education, 2001 (N=3907)

	Model 1			Model 2			Model 3		
	B	S.E.	Beta	B	S.E.	Beta	B	S.E.	Beta
Total HH Income	.400	.046	.139***	.115	.051	.040*	-.029	.059	-.010
Mothers' Education				.306	.027	.199***	.268	.028	.173***
Number Sibs in HH							.069	.037	.030
Mothers' Employment									
Looking for Work							-.184	.197	-.016
Part-time							.087	.111	.014
Fulltime							-.325	.096	-.063***
Number of Parents in HH									
No Parents in HH							-.149	.318	-.007
1 Parent in HH							-.132	.115	-.022
Child's Age							-.064	.062	-.017
Child's Gender							-.415	.079	-.083***
Race/Ethnicity									
Other							-.136	.175	-.012
Hispanic							-.832	.112	-.126***
Black							-.567	.129	-.080***
Enrollment in School							.099	.086	.020
Constant	4.354	.465		6.559	.497		8.797	.635	
R ²	.019			.048			.076		
* P < .05									
** P < .01									
*** P < .001									

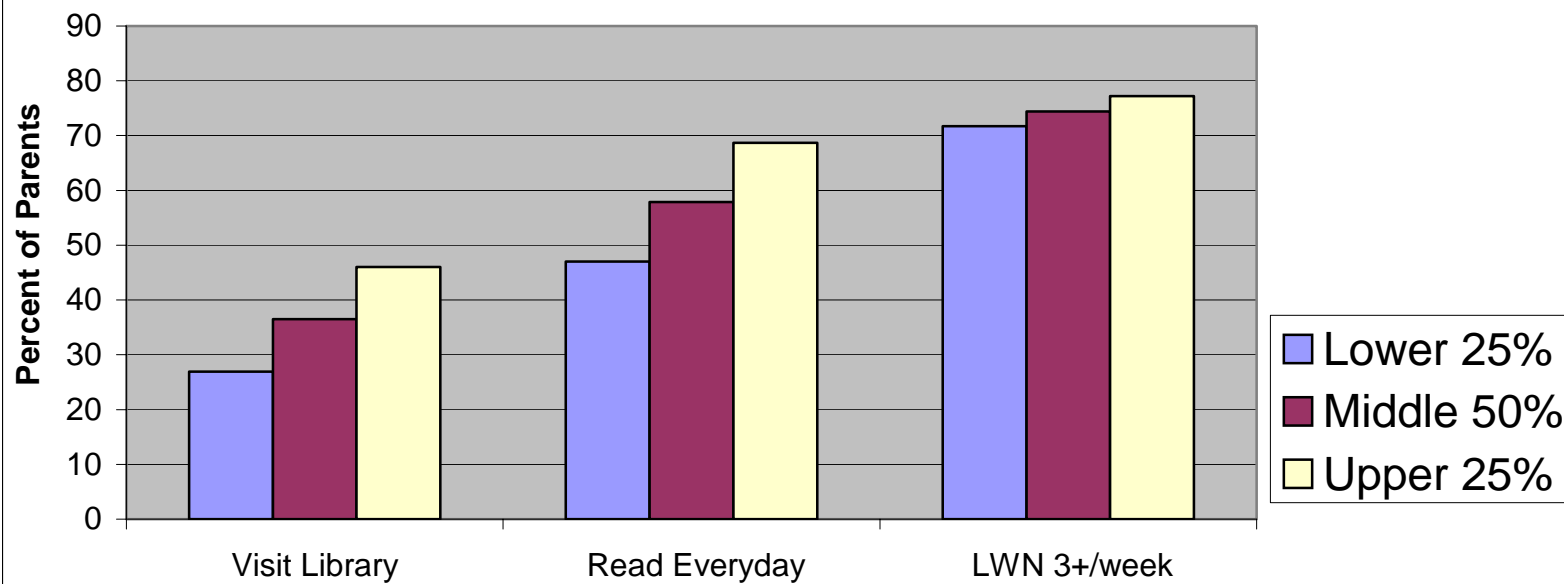
Source: National Household Education Survey, National Center for Education Statistics, 2001

Figure 4.1: Parent Reports of Engaging in Cognitive Activities with Young Children, 2001



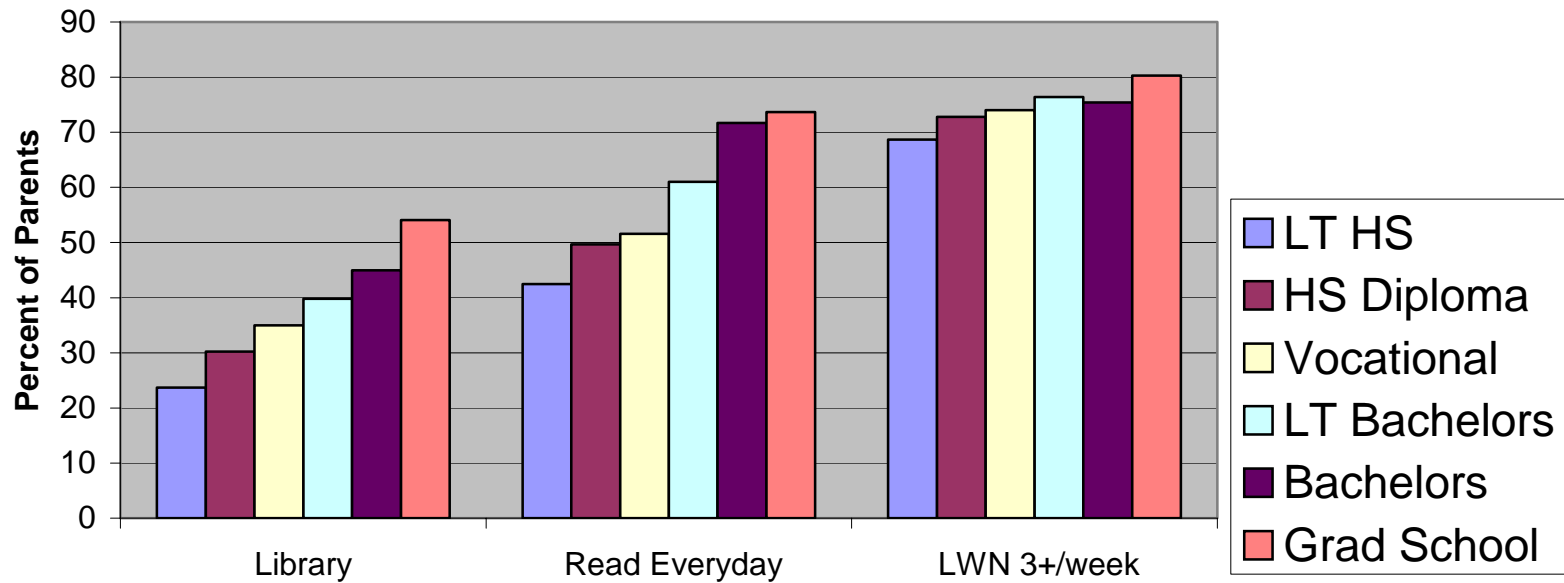
Source: 2001 The National Household Education Survey, National Center for Education Statistics

Figure 4.2: Parent Reports of Frequency of Cognitive Activities with Young Children by Income Category, 2001



Source: 2001 The National Household Education Survey, National Center for Education Statistics

Figure 4.3: Parent Reports of Frequency of Cognitive Activities with Young Children by Mother's Education, 2001



Source: 2001 The National Household Education Survey, National Center for Education Statistics

Chapter 5

Setting the Trend: Changes in *Parenting Cognitive Development* from 1951 to 2001

A pivotal idea in this dissertation is that prevailing notions of childhood have changed over time in the U.S. Specifically, I intend to show that changes have occurred in parent behaviors regarding cognitive development in young children. Parental involvement in education has become a topic of great interest and both researchers and practitioners have touted its great benefits (Epstein 1991, Muller 1993, Stevenson and Baker 1987). As discussed in the previous chapter, much of the literature in this area finds parental involvement in schooling has significant benefits for school age children (In Chapter 6, I revisit this research literature but focus on socioeconomic group differences in parental involvement in schooling). However, here I am interested in young children age three through seven and in preschool, kindergarten or the equivalent. The general trend of *parenting cognitive development* for young children has not been examined over time, and no research has attempted to describe its penetration into the entire population.

In this chapter I establish the trends in *parenting cognitive development* from 1951 to 2001. First I review the sociological literature on changes in parenting in the U.S. during the 20th century. Next, I review the research literature on changes in the U.S. during the 20th century in expert literature aimed at parents on cognitive development of children. Finally, I present data from *Patterns of Childrearing 1951-52*, the *Detroit Area Study 1963*, and the *National Household Education Surveys 1991, 1993, 1996, 1999 and 2001* to show changes in parent behaviors in the U.S. in the 50 year span.

Parenting in the 20th Century

There is limited research on changes in parenting during the 20th century but two literatures are pertinent to my thesis. First, there is a literature in developmental psychology and human development describing changes in parenting over the 20th century. Much of that research demonstrates the basic changes in approaches to parenting in day-to-day life, for example, changes in parent concerns over thumb sucking, toilet training and masturbation (Miller and Swanson 1958; Sears, Maccoby, and Levin 1957; Wolfenstein 1953). There is also a limited literature within sociology of family that looks at parenting changes over time and that literature is principally focused on class differences in child rearing techniques and preference for child qualities. These two research literatures describe trends in parenting in the U.S. during the 20th century. Each touches on parents' changing notions of children and childhood.

In the 1940s and 1950s research appeared noting class differences and changes in child rearing techniques. Davis and Havighurst (1947) noted working class mothers were more likely to be permissive in their child rearing; that is, they were more likely to breast feed, feed on demand, wean later, use a pacifier, toilet train later, and give children household responsibilities later. Middle class mothers were more likely to expect children to take naps and get more schooling. Finally, working class mothers were more likely to say their child sucked his/her thumb and masturbated. Subsequent research examined similar questions. For example, Miller and Swanson (1958) looked at these same child-rearing issues but within the context of a changing society. They attempted to demonstrate two categories of parenting of the early 1950s, entrepreneurial and

bureaucratic and connect these to the organizational trends and emerging middle class of the early 20th century. Sears, Maccoby and Levin (1957) also described 'patterns of child rearing,' the choices of mothers and the implications for children. In the 1951-52 interviews conducted by the Sears team, an entire schedule of child rearing questions were posed to mothers of kindergartens about their practices before the child started kindergarten. It is telling that of the 72 questions they asked, only one focused on activities related to cognitive development. But these early studies are heavily influenced by Freudian psychology and the implications of child rearing techniques on human behavior and psychological wellbeing.

Early ethnographic research by the Lynds' noted a change in parenting in Middletown from the late 19th to the early 20th century. They described a shift in emphasis from child bearing to child rearing, noting that earlier parents had concentrated on fitting children into society but by the 1920s parents had become more interested in enhancing their children's development (Lynd and Lynd 1929). Several studies since *Middletown* have duplicated and extended these findings. The primary contrast of obedience versus autonomy has been extended over time (Alwin 1984, Lynd and Lynd 1929, Wright and Wright 1976), between classes (Kohn 1969, Lynd and Lynd 1929) and across religious groups (Alwin 1986). Alwin (1984) describes a trend over the 20th century within the general population in parent value of child qualities. He shows a decline in preference for child qualities associated with obedience and an increase in preference for child qualities associated with autonomy or self-direction.

In addition to trends within the entire population, some researchers have noted contrasting trends among different socio-economic groups. Blau (1965) argued that

receptiveness to various child rearing practices is associated with contact with mothers from diverse social origins and Yarrow et al (1962) showed working and non-working mothers with a high school degree differed in their child rearing practices more than did working and non-working mothers with college degrees.

One research literature on SES differences looks at child rearing practices and parent preference for child qualities. The Lynds' (1929) observed middle and upper class parents preferred qualities associated with autonomy and self-direction in their children while working class parents stressed obedience. Duvall (1946) showed similar differences in conceptions of parenthood and Brody (1968) argued middle class parents were more likely to use warm child rearing techniques which encouraged autonomy while working class mothers were more likely to use passive techniques which emphasized control through rewards and punishment. Kohn (1969) further argued that high job complexity is associated with child rearing techniques that stress self-direction and internalization of behavioral norms while low job complexity is associated with child rearing techniques that stress obedience and conformity to externally imposed standards. Kohn (1969) argued that actual paid working conditions parents face in their jobs are important determinants of parental child rearing values; high job complexity is associated with child rearing techniques which stress self direction and internalization of behavioral norms while low job complexity is associated with child rearing techniques which stress obedience and conformity to externally imposed standards. Individuals come to value the characteristics demanded by their job. Because white-collar jobs involve manipulation of ideas and symbols, and permit greater autonomy and self-direction, employees come to value these characteristics and ultimately encourage them through child rearing. Blue-

collar jobs often require manipulation of things and are more closely supervised; employees in this situation ultimately embrace values such as obedience. According to Kohn, these differing work conditions have implications for the cognitive attainment and behavior of worker's children.

These two research literatures establish the dynamic nature of parenting in the 20th century and establish parent ideas about children and childhood as evolving over time. However, the sociological research literature on child rearing trends is largely from the 1940s, 1950s and 1960s and none specifically addresses issues of schooling or cognitive development. Next I look at trends during the 20th century that specifically address cognitive development.

Cognitive Development and Changes in Expert Advice during the 20th Century

Drawing on various research literatures, this section demonstrates changes over the 20th century in perceptions about children's cognitive development much like the previous section demonstrated changes in perceptions of childhood. Research on historical trends in parenting advice and homework are used to demonstrate the evolution in thought. The previous chapter highlighted the recent prominence of parental involvement in children's schooling. However, professionals, those dealing directly with children such as educators, as well as experts, those addressing parents about child related issues, have not always encouraged active adult involvement and supervision in young children's cognitive development. The expert literature to parents in the early part of the 20th century primarily focused on health and hygiene but by the second half of the

20th century, cognitive development had become a central topic (Wrigley 1989). Likewise, homework was viewed as an inappropriate activity because learning required a professional and in addition, homework encroached on family time (Gill and Schlossman 1996). Most interestingly, average homework time per week has changed little in the second half of the 20th century (Gill and Schlossman 2003), however, homework time for our youngest pupils increased dramatically in the last 20 years of the 20th century (Hofferth and Sandberg 2001, Timmer, Eccles and O'Brien 1985).

Child rearing literature since the 1940s is based on the pervasive and modern assumption that living well in adult life is largely dependent on one's earliest experiences (Wolfenstein 1955) and early experiences are a product of your parents' behavior. This literature assumes parenthood is best conceived as a continuous process rather than a set of discrete acts; everything a parent does has some effect on the child. And yet, one's tendency to look to expert literature for guidance is rooted in what Wolfenstein (1955) defines as a "changing culture." Rather than looking to elders, we look to experts because we view the advice of elders as old fashion. Specific advice to parents on child rearing practices can be found in women's magazines as far back as the 1830s (i.e. Goodrich) and by the turn of the 20th century, a number of magazines and other printed materials were available to parents. And research finds parents are more likely to use magazines and newspapers as a resource for parenting advice than parents, neighbors, relatives, or doctors but less likely to use magazines and newspapers as a resource than friends (Koepke and Williams 1989). Expert advice to parents is one mechanism by which the role of 'parent as teacher' could spread to the entire population of parents late in the diffusion process.

The social actors with credibility for advising parents on child rearing practices have changed in the last several centuries. During the emergence of childhood as a distinct phase in life, religious figures and moralists advised parents on the appropriate handling and activities for children. Yet in the 19th century doctors, educators, editors and authors, all of whom were reformers, began addressing parents on child rearing issues. In the latter half of the 19th century, professions began to specialize in particular stages of life. For example, pediatrics and child centered institutions, like the children's hospital, arose and those advising parents were increasingly specialists in this early stage of life. Indeed, reformers of the 19th century wrote not on what mother's role in cognitive development was but what they thought it should be.

Expert perceptions of the very nature of children have changed over time. Wrigley (1989) in a content analysis of popular literature for parents between 1900 and 1985 shows a dramatic change in what experts were recommending to parents. In particular, she shows the dramatic increase in the number of articles concerned with cognitive skill development.

In the early part of the century, experts were primarily concerned with hygiene and the physical well being of children. This is evident not only in the expert literature but also in requirements of day nurseries that children be bathed prior to arrival in addition to the extensive practice of bathing children during the day at many nurseries. A survey of child rearing literature from the 1920s shows little impact of Freud on child rearing advice to parents (Steere 1968), instead child rearing advice emphasized "the strict, routinized care of the child" (Holt 1894) typical to the 1920s behaviorism (Brim 1959). Ten percent of child rearing articles from the early part of the 1900s surveyed by

Wrigley actually argued stimulation was harmful to babies (Wrigley 1989). However, this does not necessarily signify a lack of interest in cognitive development but rather a particular conception of age appropriate activities. Similar attitudes on the appropriate activities of infants and young children were apparent at the turn of the century.

Psychologist Granville Stanley Hall outlined three universal, biological stages of life before 18 years of age; children must pass throughout these stages freely. According to Hall, primitive instincts and behaviors characterize the first stage. Thus, children should be left to nature and activities that develop gross motor skills (Chudacoff 1989).

Academic learning and other adult demands should not be expected of children too early. Similar attitudes on appropriate activities for young children are documented as early as the 1830's. For example, Humphrey wrote in 1840 "...it is obvious how difficult a task it must be, to persuade parents to let their sprightly little darling alone, till the rain and the sunshine have opened the bud and prepared the way for mental culture" (pp. 74). Several reformers of this time were commenting on the attempts by parents to encourage cognitive skill development too early. This encouragement of precocity by parents was linked in the popular literature to mental illness and other health problems (Kuhn 1947).

As threats to physical well being declined, experts altered their views and began giving advice on the social/emotional well being of children. In addition, by the 1930s, 24% of the articles were discussing cognitive skill development and the 1960s saw another huge jump to 47%.

At the turn of the 20th century while experts were condemning cognitive stimulation for young children, a similar movement was condemning homework for school-aged children (Gill and Schlossman 1996). Physicians, progressive educators and

even editors of women's magazines (i.e. Edward Bok of *Ladies Home Journal*) were criticizing the benefits of homework. Homework was viewed as unnecessary memorization, which encroached on play and family time. Prior to World War One some experts actually argued homework could be harmful to a child's health but during the 1920s and 1930s many argued that homework threatened the rights of children and the autonomy of the family as well as producing no achievement gains. Experts had redefined the classroom as a laboratory that required trained professionals to successfully supervise learning. Therefore, home could not be an adequate place of study and parents could not adequately assist in it (Gill and Schlossman 1996). In a similar vein, in the middle of the 20th century Anna Freud (1952) argued teachers were not mother-substitutes, must avoid a mothering role and the subsequent reactions to it and instead foster the professional role of teacher. Children, according to Anna Freud, wanted to be loved by their mothers not taught by them.

Historical analyses of time spent on homework reveal interesting trends. Contrary to popular image, amount of time per week spent on homework by the average high school student remained remarkably constant over the second half of the 20th century (Gill and Schlossman 2003). Reforms of the post-Sputnik era were temporarily successful in raising the amount of time spent on homework but by 1970 average time spent on homework dropped again so that the average 13 and 17 year old student currently spends less than one hour per day doing homework. This can be interpreted by what Goodlad (1984) described as a declining interest in the intellectual pursuits by adolescent students and the corresponding cooperation by teachers and parents in reducing this emphasis. In contrast, our current interest in cognitive skill development is focused particularly on

young children. For example, in 1981 the average out-of- school study time for 6-8 year olds was approximately 45 minutes per week but by 1997 this had risen to two hours per week (Hofferth and Sandberg 2001, Timmer, Eccles and O'Brien 1985).

These historical research literatures of the 20th century demonstrate how ideas about children's cognitive development have changed over time and like the research literature in developmental psychology and sociology of family they establish ideas about children and childhood as evolving over time. These literatures do not, however, consider changes in the socially constructed meaning around particular stages of development or the significance of changes as indicators of fundamental shifts in the fabric of society, rather the focus has been on relative differences among groups of families.

Parenting Cognitive Development in the Latter Half of the 20th Century

Romantic images of childhood in earlier times rarely include rushing from one organized activity to another; they seldom include arranged play dates or direct instruction in early childhood by a parent. Instead, these innocent images often include freedom to roam, explore and create in the years before formal schooling or after returning home from a long day of school. But what is the reality? Has some fundamental change occurred in how parents think about their young children and the activities in which they partake or is this merely selective memory intermingled with romantic notions of childhood?

In the absence of data sets that include identical indicators, establishing historical trends with secondary data sources is a complex task. I reviewed numerous data sets to

find similar indicators with comparable response categories of *parenting cognitive development*. Indicators of *parenting cognitive development* in the middle part of the 20th century are difficult to locate because much of the parenting data collected at that time are about attitudes not behaviors. However, I located several data sets that address the questions posed here. These include data sets spanning from 1951 to 2001 which contain measures of activities parents partake in with their young children that stimulate cognitive development. Sprinkled throughout the text are discussions of the comparability of the indicators and response categories.

In the following section I present descriptive data as evidence of the rise in *parenting cognitive development* over the fifty-year span from 1951 to 2001 in the U.S. Next I illustrate the rise in education attainment of the general population and rise in parent expectations of their children's education attainment in the same time period. As a larger proportion of the population go to school and stay in school longer, parental expectations for children's schooling increases and parent behaviors increasingly incorporate cognitive activities with young children.

- *Hypothesis 3: The rate of parenting cognitive development in young children has increased historically among the entire population of parents.*

Figure 5.1 portrays the dramatic rise in parental engagement in cognitive activities with young children over the past 50 years. This figure uses Patterns of Child Rearing 1951-52, the Detroit Area Study 1963 (DAS63) and the National Household Education Survey (NHES) for 1991 and 2001 and compares available components of *parenting*

cognitive development. ‘Teach’ signifies the direct instruction by parents to young children. Patterns of Child Rearing 1951-52 asked parents if they engaged in teaching reading words, writing the alphabet, drawing, or telling time before their child entered kindergarten. The NHES asked parents if they engaged in teaching letters, words or numbers. Although the questions and response categories are not identical across the selected surveys, I believe they measure the same underlying dimension of parents teaching early literacy and numeracy skills. The 1951 parents were asked to reflect on their behavior with their child in the year prior to kindergarten entrance and 1991 and 2001 parents were asked to reflect on their behavior last week. To make the response categories comparable I recoded the responses in 1951 data from a five-point scale to a three point scale by combining 2 and 3, and 4 and 5 (see Table 5.1 for frequencies and percentages of the original coding scheme). I make the conservative assumption that parents with more moderate teaching engagement could consider themselves in the ‘considerable’ category because there were no specific behavioral guidelines in the 1951 data. Therefore, 1951 data could over estimate the top response category.

The teaching of young children by parents on a regular basis prior to kindergarten increased from 53% in 1951 to 94% in 2001. By 1991 this figure had already reached 88% suggesting that the forty year period from 1951 to 1991 was a period of rapid growth and that the trend began to slow down in the latter half of the 20th century. In other words, from this figure it appears that teaching cognitive skills to young children by parents began to increase slowly like many social phenomena, and then accelerated dramatically before slowing down again. Tables 5.1 and 5.2 contain the corresponding frequencies and percentages. They show that in 1951 47% of parents responded that they

made no effort to teach their young child but by 2001 the percentage had shrunk to 6%. In 1951 only 8% of parents reported teaching their child a considerable amount before formal schooling but by 2001 this had risen to 74%.

Figure 5.1 also shows the rise in frequency of parents reading to their young children from 1963 to 1991. The reading question in each survey is similar but the response categories are slightly different. In 1963 they read 'never,' 'a few times a year or less,' 'once or twice a month,' 'once or twice a week' and 'almost everyday.' In the 1991 they read 'never,' 'several times per year,' 'several times per month' 'more than three times per week' and 'everyday.' Each response category in 1991 requires slightly more reading than the corresponding response categories in 1963. Also, it should be pointed out that there could be more error in the estimates from the DAS63 because parents of 5th and 6th graders were asked to recall their general behavior from before their child started kindergarten rather than specific behavior from last week.

Figure 5.1 shows that frequency of reading to your child has a slightly different pattern; the corresponding frequencies and percentages are contained in Table 5.3. While it is increasing, a high proportion of parents report reading to their child regularly in the DAS63. As early as 1963 a significant proportion of children were being read to by their parents at least a couple of times per month but by 1991 virtually all parents were reading to their young children at least a couple of times per month, increasing from 85% to 97%. Note in Table 5.3 the near disappearance of respondents in the category 'not at all.' Overall, according to this figure, all parents are reading quite frequently to young children.

These data indicate that during the second half of the 20th century *parenting cognitive development* seeped into the general population so that by 1991 this was normative behavior for parents. But what caused this very rapid change in parenting behaviors? I will suggest that the institutionalization of mass education propelled parenting and young children's cognitive development into a tight institutional bond over the latter half of the 20th century; the cognitive development of young children is part of the assumed role of parents. Evidence presented here shows that the role of parent as teacher is normative behavior and indicates that it is an institutionalized role for modern parents. Next I look at trends in mass education in the 20th century.

Trends in Education in the 20th Century

The expansion of schooling to include all sectors of society largely occurred in the 20th century. The development of mass education began in wealthy Western nations then spread to Asia and Africa after World War Two. Mass schooling began early and spread rapidly in the United States. School expansion in both Europe and the United States has included a steady increase in the amount of time spent in formal education as well as a massification of formally elite institutions (Trow 1961).

Figure 5.2 illustrates the dramatic expansion of school enrollments that has taken place in the U.S. in the past 100 years; corresponding percentages are contained in Table 5.4. Percent of the population attending is calculated using the most consistent age categories. Here I use ages 5-14 for elementary school, 15-19 for high school and 20-24 for college, drawn from *Demographic Trends of the 20th Century* (Hobbs and Stoops 2002). Enrollment figures are obtained from several sources as listed below the figure

and table. Significant growth has occurred in all three sectors and in both secondary and tertiary education from a very small percentage to near 70% or more. Elementary education reached near full enrollment during the 20th century. Secondary and tertiary enrollments in education increased rapidly over the century. Secondary education took off after 1910 and tertiary education after 1940. This is further illustrated in the column four of Table 5.4. The median years of schooling for adults 25 and over rose dramatically over the 20th century in the U.S. In 1910, the median years of school completed was approximately 8, by 1950 it was over 9 years and by 1990 it was almost 13 years of schooling. In other words, in the first half of the 20th century the median years of schooling increased by more than one year or 13 percent and in the second half of the 20th century schooling increased by 3 and half years or 27 percent. But the most dramatic increase occurred in the thirty-year period from 1940 to 1970 when median years of schooling completed increased by 30 percent from 8.6 to 12.2 years. This coincides with what we already know about education expansion in the 20th century (Trow 1961).

Figure 5.3 and Table 5.5 expand on this knowledge by illustrating the major changes in parent educational expectations for children from 1951 to 1988. Here I compare parents' expectations for their children's educational attainment in 1951 using Patterns of Child Rearing to 1988 using the National Educational Longitudinal Study. Parents of different age children were respondents for these two surveys. In Patterns of Child Rearing, parents of kindergarten children were interviewed where as in National Education Longitudinal Study (NELS) parents of 8th graders were surveyed. Educational expectation questions are no longer common on school surveys and the NELS88 is the

most recent available in the full range of educational options.¹⁶ Parent expectations can of course change over a child's school career but I believe that the changes reported here are conservative estimates as parents are less likely to have inflated expectations with older children. The expectation questions in these two data sets are similar but the estimated change is conservative because the Sears sample contains a smaller range of the income distribution, that is, the sample contained a working class and a middle to upper-middle class community while the NELS data contain a much broader range of family income and SES. I use parent expectations with caution as a general descriptive indicator of the impact of mass schooling on parenting. Parent expectations of children's education attainment are interesting because it suggests the faith individuals have in the institution and therefore the power it has in modern life. Two very interesting changes occur. First, the percentage of parents expecting their child to complete less than a high school diploma all but disappears by 1988, shrinking from 12% to less than 1%. Second, the percentage of parents expecting their child to receive graduate or professional training expands dramatically from 6% to 20%. This rapid diminishment of respondents in the bottom category and expansion of respondents in the top category in a thirty-seven year period coincides with the enrollment figures presented above.

Education has expanded over the 20th century in both proportion of the population attending and number of years completed. In addition, parent expectations of their children's education attainment have also risen in the latter half of the 20th century in the U.S. These changes in the population coincide with changes in parent behaviors with

¹⁶ Data from 1999 indicate that 50% of parents expect their child to attend a four year college and approximately another 25% expect their child to go to a vocational or two year college after high school (U.S. Department of Education 2003). However, additional expectation options cannot be gleaned from this data set.

young children. The descriptive data I have presented indicate that in the second half of the 20th century parents are increasingly participating in their young children's cognitive development. The rapid rise of *parenting cognitive development* in the latter half of the 20th century suggests that parents increasingly view education as an important institution in modern life. These results show that the expansion of mass schooling has been closely associated with changes in the activities parents engage in with their young children and suggest that the expansion of mass schooling created the role of 'parent as teacher.'

Parenting Cognitive Development in the Ten Year Span from 1991 to 2001

The previous section enlisted several data sets in order to establish the long-term trends in *parenting cognitive development*. In this section I use five waves of the National Household Education Survey (NHES) because they are nationally representative surveys that contain identical measures. Unfortunately, they are not available prior to 1991 but they do allow me to investigate trends in *parenting cognitive development* from 1991 to 2001 and establish the trends in the last decade of the 20th century in greater detail by looking at each indicator of *parenting cognitive development* separately as a dependent variable in a logistic regression.

Parenting cognitive development is a construct of six components. Teaching letters, words and number (LWN), singing songs or music activities, telling a story and doing arts and crafts are dichotomized as three or more times last week or less than three times last week. Reading to your child is dichotomized at everyday last week or less than everyday last week and visiting the library in the last month is a yes/no response (see table 3.2 for more detail). Tables 5.6 through 5.11 show the frequencies and percentages

of the components of *parenting cognitive development* over time. The percentage of respondents in the top category increases from 1991 to 2001 in all cases but visiting the library.

Tables 5.12 to 5.17 depict the logistic regression estimates of the six dichotomous components of *parenting cognitive development* drawn from the NHES 1991, 1993, 1996, 1999 and 2001 on household income and mothers' education. In each table, Model 1 shows the aggregate trend of time and Model 2 examines the trend of time controlling for level of mothers' education and household income as well as demographic and family background variables. Specifically, Model 2 uses number of siblings, mothers' employment status, number of parents in the household, child's age, gender, race/ethnicity, and school enrollment as control variables. The first five control variables represent non-educational family characteristics that past research shows have an influence on parenting behavior with young children. The research and rationale behind these variables is addressed in detail in Chapter 7. Since parent behavior regarding cognitive development may change with school enrollment, I control for it here. Race/ethnicity is included because some research suggests it may influence parenting behavior (Lareau and Horvat 1999).

Overall, several interesting results should be noted. First, with the exception of visiting the library, the odds of each component increase from 1991 to 2001. The odds of visiting the library actually decrease but this is not statistically significant. In addition, the odds of mothers' education are always greater than household income and interestingly, household income is not consistently significant or positive. Finally, neither mothers' education nor household income is significant in teaching letters, words and numbers.

The Components of *Parenting Cognitive Development*

Reading to Your Child:

It is widely agreed upon in the early childhood literature that reading to your child is an important activity that contributes to the cognitive development and reading readiness of young children. Research shows reading to your child builds reading skills (Saracho 1997, Snow, Burns and Griffin 1998) as well as stimulating imagination, building vocabulary, and introducing the parts of story (Moss and Fawcett 1995). Frequencies and percentages in Table 5.6 indicate that the percentage of parents responding they read to their child everyday last week increased from 41% to 58% from 1991 to 2001. In fact, every other category decreased in the time period from 1991 to 2001. Results from the logistic analysis shown in Table 5.12 indicate that time has a significant positive effect in both Model 1 and Model 2. However, as can be seen in Table 5.12, the odds of reading to your child everyday increase only slightly with each unit increase in year. So, for example, in Model 2 the odds of reading to your child everyday are 1.051 greater with each increase in year. In addition, increases in year, income and mothers' education are all positively and significantly associated with reading to your child everyday. Finally, with the exception of no parents in the household, all the variables in the model are significantly different from zero.¹⁷

¹⁷ The Wald Statistic should be interpreted cautiously especially with categorical variables because it may lead to Type II errors (Menard 1995). Because I have a large N I report the significance of the unstandardized logistic regression coefficients with caution as an initial indicator of the variables significance as a predictor of *parenting cognitive development*.

Letters, Words and Numbers

Teaching letters, words and numbers is direct cognitive instruction by parents to children. In teaching letters, words and numbers parents impart specific skills needed for literacy and numeracy. Table 5.7 shows that the percentage of parents responding they taught letters, words and numbers three or more times last week increased from 62% to 74% from 1991 to 2001 but while the general upward trend is there, both 1993 and 1999 decreased slightly from the prior year. In addition, the percentage of parents responding 'not at all' decreased by one half to six percent by 2001. Results from the logistic analyses shown in Table 5.13 indicate that the odds of teaching your child letters, words and numbers three or more times last week increased slightly from 1991 to 2001 in both Model 1 and Model 2. Model 2 shows that the odds of teaching your child letters, words and numbers three or more times last week increased by 1.060 with each unit increase in year. Finally, the effect of household income and mothers' education are not statistically significant but several of the control variables are statistically significant.

Songs and Music

Songs and music are widely incorporated into early childhood education as an important component of building early cognitive skills. Singing encourages phonological awareness (Bryant et al 1990, MacLean, Bryant and Bradley 1987) and encourages language and rhythm awareness (Moss and Fawcett 1995). Table 5.8 shows the percentage of parents responding they engaged in music activities with their young child 'three or more times last week' rose from 36% to 54% from 1991 to 2001. Interestingly, the percentage of respondents in the '1-2 times last week' remained fairly steady at 27% and the percentage of respondents in the 'not at all' category shrank from 38% to 19%. Results from the logistic analyses shown in Table 5.14 indicate that the odds of engaging in music activities with your young child 'three or more times last week' increased from 1991 to 2001 in both Model 1 and Model 2. In Model 2, the odds of teaching songs or music three or more times last week increased by 1.060 with each unit increase from 1991 to 2001. Finally, both mothers' education and household income are significant at the .001 level but the odds of household income decreased from 1991 to 2001 and several control variables in the logistic analysis are not statistically significant.

Telling Stories

Telling stories is a worldwide cultural tradition. It has been linked to better reading skills (Glazer 1989, Sonnenschein, Brody and Munsterman 1996) because it stimulates the imagination, builds vocabulary, and introduces the parts of story (Moss and Fawcett 1995). Table 5.9 shows the parent reports of engaging in story telling with their young children rose from 37% to 54% from 1991 to 2001 and again the percentage in 1999 is slightly lower than 1996. Results from the logistic analyses reported in Table

5.15 show in both Model 1 and Model 2 the odds of telling stories to your young child increase with each unit increase in year from 1991 to 2001 and Model 2 shows that the odds of telling stories to your child ‘three or more times last week’ increased by 1.064 with each year when controlling for demographic and family background factors. In Model 2, also note that mothers’ education is significant and positive but household income is not and a few of the control variables are not significantly different from zero.

Arts and Crafts

Arts and crafts are creative activities crucial to the development of young children that build fine motor skills, improve math learning and support discovery (Armistead 1996, Baker 1992). Table 5.10 shows the percentage of parents reporting they engaged in arts and crafts activities with their young child three or more times last week rose from 33% to 46% from 1991 to 2001. It also shows the percentage of parents reporting they engaged in arts and crafts activities ‘one or two times last week’ stayed relatively constant at 34% while the percent of parents reporting ‘not at all’ shrank from 33% to 21%. Table 5.16 shows the results of the logistic regression analyses. In both Model 1 and Model 2, the odds of doing arts and crafts activities with your child ‘three or more times last week’ increased from 1991 to 2001 and model 2 shows that the odds of parents doing arts and crafts activities with their young children ‘three or more times last week’ increased by 1.049 with each unit increase in year. Finally, like telling stories mothers’ education is significant and positive but household income is not. In addition, several control variables in the logistic analysis are not significantly different from zero.

Visiting the Library

Visiting the library is the one activity included here which is seldom included in preschool education but introduced early in the elementary years. It represents parental support and encouragement of literacy activities. Table 5.11 shows the percentage of parents reporting they visited the library with their young child last month actually decreased from 38% to 36%; overall though, the pattern in visiting library remains remarkable consistent over the ten year period from 1991 to 2001. Table 5.17 shows that in both Model 1 and Model 2 year is negative but not statistically significant. Recall from the discussion of Visiting the Library as a component of *parenting cognitive development* in Chapter 3 that it had the lowest factor loading but was retained because the PFA factor loadings when library is dropped from the analysis change little, the percent of variance explained only increased from 23 percent to 26 percent, a Cronbach's alpha of .57 although slightly low, was determined sufficient and the elimination of a single item did not sufficiently improve the latent construct. Therefore, I choose to retain it for theoretical reasons. Like reading and music, both household income and mothers' education are significant and positively related to visiting the library. Again, several control variables in the logistic analysis are not significantly different from zero.

The Composite of *Parenting Cognitive Development*

Hypothesis 3 requires a test of the main effect of time on the scale of *parenting cognitive development* or the composite of dependent variables while controlling for several demographic variables. The analysis shown in Table 5.18 replicates the analysis presented in Chapter 4 of the year 2001 but with the five waves of the NHES data. Year

shows OLS estimates for the regression of the scale of *parenting cognitive development* measure on time. The effect of year is positive and significant. So for example on the 13-point composite scale of *parenting cognitive development*, the difference of year 2001 as compared to 1991 is associated with a 1.21 point increase in the scale. In fact, in the ten year span from 1991 to 2001 *parenting cognitive development* increased by 17% but the R^2 of .098 indicates only about 10% of the variation in *parenting cognitive development* is explained in this model.

The results of the analyses thus far imply that while a short-term trend does exist and *parenting cognitive development* increased between 1991 and 2001, by 1991 it had already become normative behavior. Given how widespread *parenting cognitive development* was by 1991, however, it is remarkable that a consistent upward trend continues to mark the last decade of the 20th century. Between 1991 and 2001 the trend was still inching upward but a high proportion of all parents were already participating in *parenting cognitive development*. This is illustrated in the mean of the composite of *parenting cognitive development*. In 1991 the mean of the composite of *parenting cognitive development* was approximately 7; by 2001 it had inched up to 8.4. Further, the frequencies reveal only 5% of the total population obtained a 0, 1, or 2 on the scale of *parenting cognitive development* in 1991. This declined to 2% by 2001. In addition, only 8% obtain a 0 through 4. Figure 5.4 and 5.19 (see Table 5.11 for visiting the library frequencies) depict this gradual rise in *parenting cognitive development* over the ten year span from 1991 to 2001. They show a gradual rise in each of the five components (visiting the library has a much more static trend as discussed in other sections). All of the five indicators begin quite high at well over 60% of parents reporting engaging in the

activity with their child at least once in last week. Both reading to your child and teaching letters, words and numbers begin at well over 85% and show a 3% to 6% increase but music activities, story telling and arts and crafts all show an increase of 11 to 19%.

Trends in *parenting cognitive development* from 1991 to 2001 show a gradual increase over time. However, these analyses also show that *parenting cognitive development* is a normative behavior by 1991; a large proportion of all parents are engaging in cognitive activities with their children by 1991. Both the OLS regression and logistic regressions show year is positive and significantly different from zero.

Conclusions about historical trends in *parenting cognitive development*

Evidence from this chapter shows that along with the rise of mass education in the latter half of the 20th century, parents became increasingly involved in *parenting cognitive development* so that it was normative behavior by the end of the century. Parent behaviors with regard to children's cognitive development changed considerably over the second half of the 20th century. The descriptive analyses show that over the second half of the 20th century, parents increasingly engaged in cognitively based activities with young children. In addition, these analyses show that by 1991 a large proportion of parents were engaging in these types of activities and that from 1991 to 2001 the proportion of parents continued to increase but at a slower pace because such a high proportion were already engaging in these activities. *Parenting cognitive development* had become normative behavior by the turn of the 21st century. Historical data on school enrollments and school attainment show the dramatic expansion of

secondary education over the 20th century and the similarly dramatic expansion of higher education beginning about 1940. Likewise, adult female median years of schooling increased over the 20th century. These initial descriptive results imply that the rise in *parenting cognitive development* coincides with the expansion of education in the U.S. OLS analyses of the short-term trend from 1991 to 2001 show that effect of year is positive and significant but only about 10% of the variation in *parenting cognitive development* is explained in the model. Analyses using logistic regression show year is in fact a significant predictor of the individual components of parenting cognitive development with the exception of visiting the library.

These results demonstrate the penetration of the norms of mass schooling into the family. As increasingly larger proportions of the population went to school and stay in school longer, *parenting cognitive development* was added to the parenting role. Schooling as a powerful institution in modern society shapes parenting. This includes creating the role of 'parent as teacher' and the subsequent change in our notions of appropriate behaviors for young children.

Table 5.1: Frequencies and Percentages of Parent Reports of Teaching Reading, Writing, Drawing and Telling Time before Kindergarten, 1951-52 (N=375)

<u>Frequency</u>	<u>Percentage</u>
No Teaching	46.9 (176)
2	12.5 (47)
Some Teaching	32.5 (122)
4	5.6 (21)
Considerable Teaching	2.4 (9)

Source: Patterns of Child Rearing, Sears, Maccoby, and Levin, 1951-52

Table 5.2: Frequencies and Percentages of Parent Reports of Teaching Letters, Words or Numbers Last Week, 1991 (N=5643) and 2001 (N=3907)

<u>Frequency</u>	<u>Year</u>	
	<u>1991</u>	<u>2001</u>
Not at all	12.4 (701)	5.9 (232)
1-2 times	25.4 (1431)	19.8 (772)
3 or more	62.2 (3511)	74.3 (2903)

Source: The National Household Education Survey, National Center for Education Statistics, 1991
The National Household Education Survey, National Center for Education Statistics, 2001

Table 5.3: Frequencies and Percentages of Parent Reports of Reading to Child before Kindergarten, 1963 and 1991

<u>Frequency</u>	<u>Year</u>	
	<u>1963</u>	<u>1991</u>
Not at all	7.9 (120)	1.0 (52)
A few times per year	7.1 (108)	2.3 (113)
A few times per month	11.2 (170)	14.6 (701)
1 or 2 times per week	34.2 (519)	37.9 (1883)
Almost Everyday	39.6 (602)	44.2 (2329)

Source: Detroit Area Study Litwak and Meyer, 1963
 National Household Education Survey, National Center for Education Statistics, 1991

Table 5.4: Estimated Percentage of the Age Appropriate Population Enrolled in School by School Level, and Median Years of Schooling Completed, 1900-2000

<u>Year</u>	<u>Elementary</u>	<u>High School</u>	<u>College</u>	<u>Median Years Schooling</u>
1900	79	9	3	NA
1910	80	12	4	8.1
1920	83	27	6	8.27
1930	83	42	10	8.44
1940	86	58	12	8.6
1950	86	61	21	9.3
1960	91	69	33	10.5
1970	93	72	45	12.2
1980	93	77	48	12.5
1990	95	77	59	12.7
2000	98	78	68	NA

Source: 1900-1950 *Historical Statistics of the United States Colonial Times to 1970*, U.S. Department of Commerce for elementary and HS enrollments
Historical Statistics of the United States Colonial Times to 1957, U.S. Department of Commerce for undergraduate enrollments.

1960-2000 *Current Population Survey*, U.S. Census Bureau

Source: 1910-30 *The First Measured Century*, Caplow et al

1940-70 *Historical Statistics of the United States Colonial Times to 1970*, U.S. Department of Commerce

1980-90 *Statistical Abstracts*, U.S. Census Bureau

Table 5.5: Frequencies and Percentages of Parent Expectations for Child's Schooling, 1951-52 (N=367) and 1988 (N=22,651)

<u>Parent Expectations</u>	<u>Year</u>	
	<u>1951-52</u>	<u>1988</u>
Less Than High School	12 (44)	.05 (11)
High School Diploma	9.3 (34)	12.6 (2854)
Technical School	5.7 (21)	8.7 (1971)
Some College	24.5 (90)	20.3 (4598)
Bachelor's Degree	42.5 (157)	37.9 (8585)
Advanced	5.7 (21)	20 (4530)

Source: Patterns of Child Rearing, Sears, Maccoby, and Levin, 1951-52
National Education Longitudinal Survey, National Center for Education Statistics, 1988

Table 5.6: Frequencies and Percentages of Parent Reports of Reading to Child, 1991-2001

<u>Frequency</u>	<u>Year</u>				
	<u>1991</u>	<u>1993</u>	<u>1996</u>	<u>1999</u>	<u>2001</u>
Not at all	5.8 (329)	5.1 (292)	3.2 (188)	3.1 (174)	2.5 (99)
1-2 times	22.6 (1280)	17.4 (1002)	14.6 (852)	14.6 (833)	13.3 (521)
3 or more	30.7 (1736)	26.6 (1528)	27.9 (1626)	29.2 (1660)	26.6 (1041)
Everyday	40.9 (2313)	50.9 (2929)	54.2 (3158)	53.1 (3026)	57.5 (2246)

Source: National Household Education Survey, National Center for Education Statistics, 1991
National Household Education Survey, National Center for Education Statistics, 1993
National Household Education Survey, National Center for Education Statistics, 1996
National Household Education Survey, National Center for Education Statistics, 1999
National Household Education Survey, National Center for Education Statistics, 2001

Table 5.7: Frequencies and Percentages of Parent Reports of Teaching Letters, Words and Numbers to Child, 1991-2001

<u>Frequency</u>	<u>Year</u>				
	<u>1991</u>	<u>1993</u>	<u>1996</u>	<u>1999</u>	<u>2001</u>
Not at all	12.4 (701)	12.3 (709)	6.6 (383)	9.9 (562)	5.9 (232)
1-2 times	25.4 (1431)	27.3 (1571)	20 (1164)	22.7 (1290)	19.8 (772)
3 or more	62.2 (3511)	60.4 (3471)	73.4 (4276)	67.5 (3842)	74.3 (2903)

Source: National Household Education Survey, National Center for Education Statistics, 1991
National Household Education Survey, National Center for Education Statistics, 1993
National Household Education Survey, National Center for Education Statistics, 1996
National Household Education Survey, National Center for Education Statistics, 1999
National Household Education Survey, National Center for Education Statistics, 2001

Table 5.8: Frequencies and Percentages of Parent Reports of Engaging in Music Activities with Child, 1991-2001

<u>Frequency</u>	<u>Year</u>				
	<u>1991</u>	<u>1993</u>	<u>1996</u>	<u>1999</u>	<u>2001</u>
Not at all	37.9 (2137)	33.2 (1907)	24.2 (1408)	27 (1540)	18.8 (736)
1-2 times	26.6 (1499)	30.1 (1731)	26.8 (1558)	29.1 (1658)	27 (1055)
3 or more	35.5 (2003)	36.7 (2114)	49.1 (2857)	43.8 (2496)	54.2 (2116)

Source: National Household Education Survey, National Center for Education Statistics, 1991
National Household Education Survey, National Center for Education Statistics, 1993
National Household Education Survey, National Center for Education Statistics, 1996
National Household Education Survey, National Center for Education Statistics, 1999
National Household Education Survey, National Center for Education Statistics, 2001

Table 5.9: Frequencies and Percentages of Parent Reports of Telling Stories to Child, 1991-2001

<u>Frequency</u>	<u>Year</u>				
	<u>1991</u>	<u>1993</u>	<u>1996</u>	<u>1999</u>	<u>2001</u>
Not at all	28.1 (1584)	25.6 (1475)	18.3 (1064)	17.8 (1012)	16.5 (644)
1-2 times	35.3 (1984)	33.9 (1952)	28.9 (1683)	33.8 (1924)	29.2 (1139)
3 or more	36.6 (2061)	40.4 (2325)	52.8 (3077)	48.4 (2757)	54.3 (2123)

Source: National Household Education Survey, National Center for Education Statistics, 1991
National Household Education Survey, National Center for Education Statistics, 1993
National Household Education Survey, National Center for Education Statistics, 1996
National Household Education Survey, National Center for Education Statistics, 1999
National Household Education Survey, National Center for Education Statistics, 2001

Table 5.10: Frequencies and Percentages of Parent Reports of Engaging in Arts and Crafts Activities with Child, 1991-2001

<u>Frequency</u>	<u>Year</u>				
	<u>1991</u>	<u>1993</u>	<u>1996</u>	<u>1999</u>	<u>2001</u>
Not at all	33.1 (1872)	32.1 (1846)	23.3 (1360)	24.1 (1372)	20.6 (803)
1-2 times	33.5 (1895)	35.8 (2057)	35.3 (2055)	37 (2106)	34 (1327)
3 or more	33.3 (1882)	32.1 (1848)	41.4 (2409)	38.9 (2215)	45.5 (1776)

Source: National Household Education Survey, National Center for Education Statistics, 1991
National Household Education Survey, National Center for Education Statistics, 1993
National Household Education Survey, National Center for Education Statistics, 1996
National Household Education Survey, National Center for Education Statistics, 1999
National Household Education Survey, National Center for Education Statistics, 2001

Table 5.11: Frequencies and Percentages of Parent Reports of Visiting the Library in the Last Month with Child, 1991-2001

	Year				
	<u>1991</u>	<u>1993</u>	<u>1996</u>	<u>1999</u>	<u>2001</u>
No	62.5 (3537)	60.5 (3482)	61.2 (3564)	60.8 (3460)	63.8 (2494)
Yes	37.5 (2118)	39.5 (2270)	38.8 (2259)	39.2 (2234)	36.2 (1412)

Source: National Household Education Survey, National Center for Education Statistics, 1991
National Household Education Survey, National Center for Education Statistics, 1993
National Household Education Survey, National Center for Education Statistics, 1996
National Household Education Survey, National Center for Education Statistics, 1999
National Household Education Survey, National Center for Education Statistics, 2001

Table 5.12: Logistic Regression of the Reading Component of *Parenting Cognitive Development* on Year, Household Income and Mothers' Education, 1991-2001 (N=25,953)

	Model 1			Model 2		
	B	S.E.	Exp(B)	B	S.E.	Exp(B)
Year	.053***	.003	1.055	.050***	.004	1.051
Total HH Income				.097***	.019	1.102
Mothers' Education				.218***	.010	1.244
Number Sibs in HH				-.107***	.012	.899
Mothers' Employment						
Looking for Work				-.402***	.032	.669
Part-time				-.234***	.036	.791
Fulltime				-.145*	.059	.865
Number of Parents in HH						
No Parent in HH				.196	.111	1.217
1 Parent in HH				-.087*	.036	.917
Child's Age				-.137***	.016	.872
Child's Gender				-.131***	.026	.877
Race/Ethnicity						
Other				-.532***	.041	.587
Hispanic				-.648***	.040	.523
Black				-.347***	.061	.707
Enrollment in School				-.105***	.031	.900
Constant				-.211		-.382
Nagelkerke R ²				.012		.113
* P < .05						
** P < .01						
*** P < .001						

Source: National Household Education Survey, National Center for Education Statistics, 1991
National Household Education Survey, National Center for Education Statistics, 1993
National Household Education Survey, National Center for Education Statistics, 1996
National Household Education Survey, National Center for Education Statistics, 1999
National Household Education Survey, National Center for Education Statistics, 2001

Table 5.13: Logistic Regression of the Teaching LWN Component of *Parenting Cognitive Development* on Year, Household Income and Mothers' Education, 1991-2001 (N=25,937)

	Model 1			Model 2		
	B	S.E.	Exp(B)	B	S.E.	Exp(B)
Year	.054***	.004	1.056	.058***	.004	1.060
Total HH Income				-.001	.020	.999
Mothers' Education				.019	.010	1.019
Number Sibs in HH				-.117***	.012	.889
Mothers' Employment						
Looking for Work				-.169***	.033	.844
Part-time				-.092*	.037	.912
Fulltime				.013	.061	1.013
Number of Parents in HH						
No Parent in HH				.118	.124	1.125
1 Parent in HH				-.060	.038	.942
Child's Age				.079***	.016	1.082
Child's Gender				-.049	.027	.952
Race/Ethnicity						
Other				.321***	.044	1.379
Hispanic				-.127**	.040	.881
Black				.146*	.065	1.157
Enrollment in School				-.044	.032	.957
Constant	.467			.373		
Nagelkerke R ²	.011			.024		
* P < .05						
** P < .01						
*** P < .001						

Source: National Household Education Survey, National Center for Education Statistics, 1991
National Household Education Survey, National Center for Education Statistics, 1993
National Household Education Survey, National Center for Education Statistics, 1996
National Household Education Survey, National Center for Education Statistics, 1999
National Household Education Survey, National Center for Education Statistics, 2001

Table 5.14: Logistic Regression of the Music Component of *Parenting Cognitive Development* on Year, Household Income and Mothers' Education, 1991-2001 (N=25,934)

	Model 1			Model 2		
	B	S.E.	Exp(B)	B	S.E.	Exp(B)
Year	.067***	.004	1.069	.059***	.004	1.060
Total HH Income				-.106***	.019	.899
Mothers' Education				.037***	.010	1.037
Number Sibs in HH				.009	.012	1.009
Mothers' Employment						
Looking for Work				-.089**	.032	.915
Part-time				.006	.036	1.006
Fulltime				-.109	.058	.897
Number of Parents in HH						
No Parent in HH				.070	.110	1.072
1 Parent in HH				.002	.036	1.002
Child's Age				-.353***	.016	.703
Child's Gender				-.252***	.026	.778
Race/Ethnicity						
Other				.152***	.041	1.164
Hispanic				-.018	.039	.982
Black				-.055	.061	.946
Enrollment in School				.048	.031	1.049
Constant						2.001
Nagelkerke R ²						.064
* P < .05						
** P < .01						
*** P < .001						

Source: National Household Education Survey, National Center for Education Statistics, 1991
National Household Education Survey, National Center for Education Statistics, 1993
National Household Education Survey, National Center for Education Statistics, 1996
National Household Education Survey, National Center for Education Statistics, 1999
National Household Education Survey, National Center for Education Statistics, 2001

Table 5.15: Logistic Regression of the Story Telling Component of *Parenting Cognitive Development* on Year, Household Income and Mothers' Education, 1991-2001 (N=25,937)

	Model 1			Model 2		
	B	S.E.	Exp(B)	B	S.E.	Exp(B)
Year	.068***	.003	1.070	.062***	.004	1.064
Total HH Income				.001	.019	1.001
Mothers' Education				.064***	.009	1.066
Number Sibs in HH				-.017	.011	.983
Mothers' Employment						
Looking for Work				-.124***	.031	.884
Part-time				-.072*	.035	.930
Fulltime				.076	.057	1.079
Number of Parents in HH						
No Parents in HH				.103	.108	1.109
1 Parent in HH				-.111**	.036	.895
Child's Age				-.162***	.015	.850
Child's Gender				-.055*	.025	.946
Race/Ethnicity						
Other				-.134***	.041	.875
Hispanic				-.264***	.039	.768
Black				.163**	.060	1.177
Enrollment in School				.001	.030	1.001
Constant	-.477			.257		
Nagelkerke R ²	.019			.037		
* P < .05						
** P < .01						
*** P < .001						

Source: National Household Education Survey, National Center for Education Statistics, 1991
National Household Education Survey, National Center for Education Statistics, 1993
National Household Education Survey, National Center for Education Statistics, 1996
National Household Education Survey, National Center for Education Statistics, 1999
National Household Education Survey, National Center for Education Statistics, 2001

Table 5.16: Logistic Regression of the Craft Component of *Parenting Cognitive Development* on Year, Household Income and Mothers' Education, 1991-2001 (N=25,943)

	Model 1			Model 2		
	B	S.E.	Exp(B)	B	S.E.	Exp(B)
Year	.049***	.004	1.051	.047***	.004	1.049
Total HH Income				.035	.019	1.036
Mothers' Education				.107***	.010	1.113
Number Sibs in HH				.021	.012	1.022
Mothers' Employment						
Looking for Work				-.235***	.032	.790
Part-time				-.022	.036	.979
Fulltime				.080	.059	1.083
Number of Parents in HH						
No Parent in HH				-.216	.119	.805
1 Parent in HH				-.030	.037	.970
Child's Age				-.079***	.016	.924
Child's Gender				-.265***	.026	.767
Race/Ethnicity						
Other				-.399***	.043	.671
Hispanic				-.218***	.040	.804
Black				-.210***	.062	.810
Enrollment in School				-.021	.031	.979
Constant				-.734		-.682
Nagelkerke R ²				.010		.042
* P < .05						
** P < .01						
*** P < .001						

Source: National Household Education Survey, National Center for Education Statistics, 1991
National Household Education Survey, National Center for Education Statistics, 1993
National Household Education Survey, National Center for Education Statistics, 1996
National Household Education Survey, National Center for Education Statistics, 1999
National Household Education Survey, National Center for Education Statistics, 2001

Table 5.17: Logistic Regression of the Library Component of *Parenting Cognitive Development* on Year, Household Income and Mothers' Education, 1991-2001 (N=25,949)

	Model 1			Model 2		
	B	S.E.	Exp(B)	B	S.E.	Exp(B)
Year	-.003	.004	.997	-.004	.004	.996
Total HH Income				.155***	.020	1.167
Mothers' Education				.253***	.010	1.288
Number Sibs in HH				.016	.012	1.016
Mothers' Employment						
Looking for Work				-.397***	.033	.672
Part-time				-.027	.036	.973
Fulltime				.084	.060	1.088
Number of Parents in HH						
No Parent in HH				-.374**	.128	.688
1 Parent in HH				-.023	.038	1.023
Child's Age				.147***	.016	1.158
Child's Gender				-.051	.026	.950
Race/Ethnicity						
Other				-.139***	.043	.871
Hispanic				-.270***	.042	.764
Black				-.012	.062	.988
Enrollment in School				-.155***	.032	.856
Constant	-.462			-2.896		
Nagelkerke R ²	.000			.093		
* P < .05						
** P < .01						
*** P < .001						

Source: National Household Education Survey, National Center for Education Statistics, 1991
National Household Education Survey, National Center for Education Statistics, 1993
National Household Education Survey, National Center for Education Statistics, 1996
National Household Education Survey, National Center for Education Statistics, 1999
National Household Education Survey, National Center for Education Statistics, 2001

Table 5.18: OLS Regression Estimates of the Scale of *Parenting Cognitive Development* on Year, Household Income and Mothers' Education, 1991-2001 (N=25,895)

	B	Model 1 S.E.	Beta	B	Model 2 S.E.	Beta
Year	.131	.005	.175***	.121	.005	.162***
Total HH Income				.088	.023	.029***
Mothers' Education				.261	.012	.153***
Number Sibs in HH				-.064	.014	-.028***
Mothers' Employment						
Looking for Work				.042	.071	.004
Part-time				-.081	.044	-.012
Fulltime				-.434	.039	-.079***
Number of Parents in HH						
No Parent in HH				-.097	.135	-.004
1 Parent in HH				-.124	.044	-.020**
Child's Age				-.225	.019	-.081***
Child's Gender				-.296	.031	-.056***
Race/Ethnicity						
Other				-.246	.075	-.020***
Hispanic				-.787	.048	-.105***
Black				-.417	.050	-.056***
Enrollment in School				.141	.038	.026***
Constant	7.104			7.203		
R ²	.031			.098		

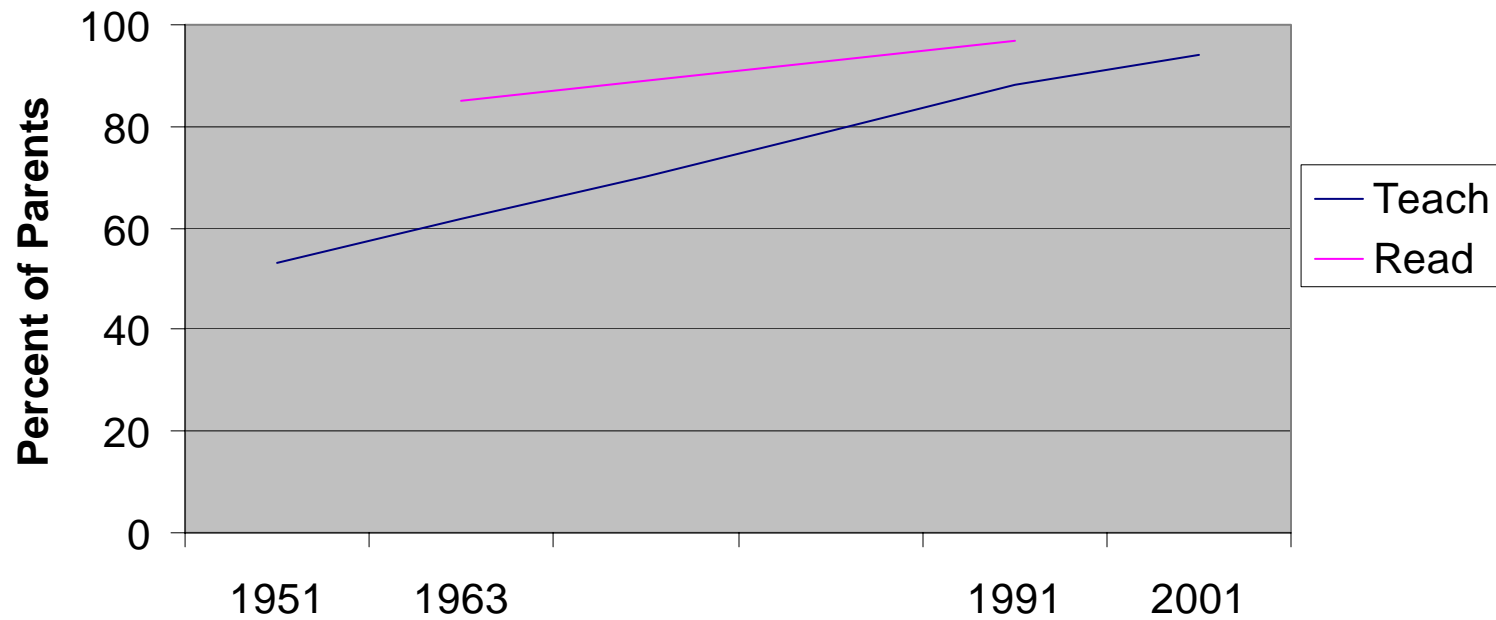
Source: National Household Education Survey, National Center for Education Statistics, 1991
National Household Education Survey, National Center for Education Statistics, 1993
National Household Education Survey, National Center for Education Statistics, 1996
National Household Education Survey, National Center for Education Statistics, 1999
National Household Education Survey, National Center for Education Statistics, 2001

Table 5.19: Parent Reports of Engagement in Cognitive Activities with Young Children at least once last week, 1991-2001

<u>Cognitive Activity</u>	<u>Year</u>				
	<u>1991</u>	<u>1993</u>	<u>1996</u>	<u>1999</u>	<u>2001</u>
Craft	66.9 (4777)	67.9 (3906)	76.7 (4463)	75.9 (4321)	79.4 (3104)
Story	71.9 (4045)	74.4 (4277)	81.7 (4759)	82.2 (4681)	83.5 (3263)
Music	62.1 (3502)	66.8 (3845)	75.8 (4415)	73 (4153)	81.2 (3171)
Letters, Words, Numbers	87.6 (4942)	87.7 (5043)	93.4 (5440)	90.1 (5131)	94.1 (3675)
Read	94.2 (5230)	94.9 (5460)	96.8 (5635)	96.9 (5519)	97.5 (3808)

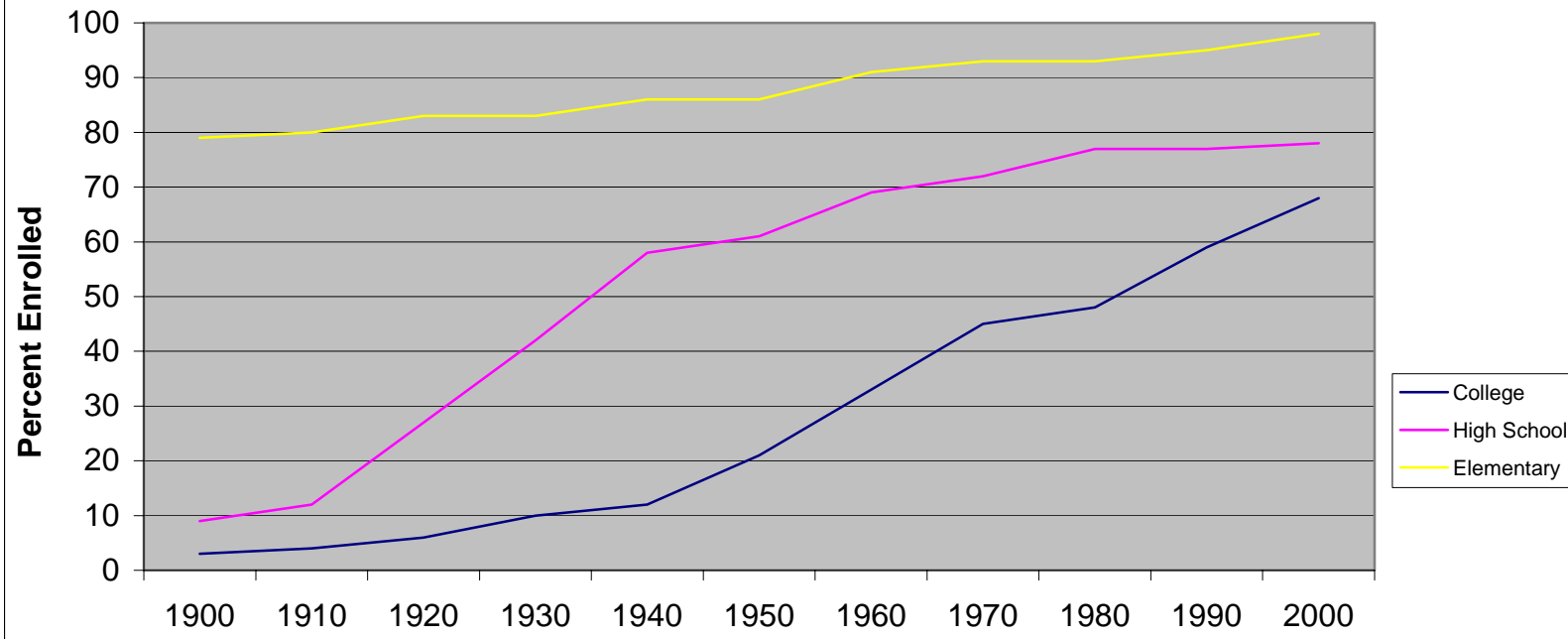
Source: National Household Education Survey, National Center for Education Statistics, 1991
National Household Education Survey, National Center for Education Statistics, 1993
National Household Education Survey, National Center for Education Statistics, 1996
National Household Education Survey, National Center for Education Statistics, 1999
National Household Education Survey, National Center for Education Statistics, 2001

Figure 5.1 Parent Reports of Engagement in Cognitive Activities with Young Children, 1951-2001



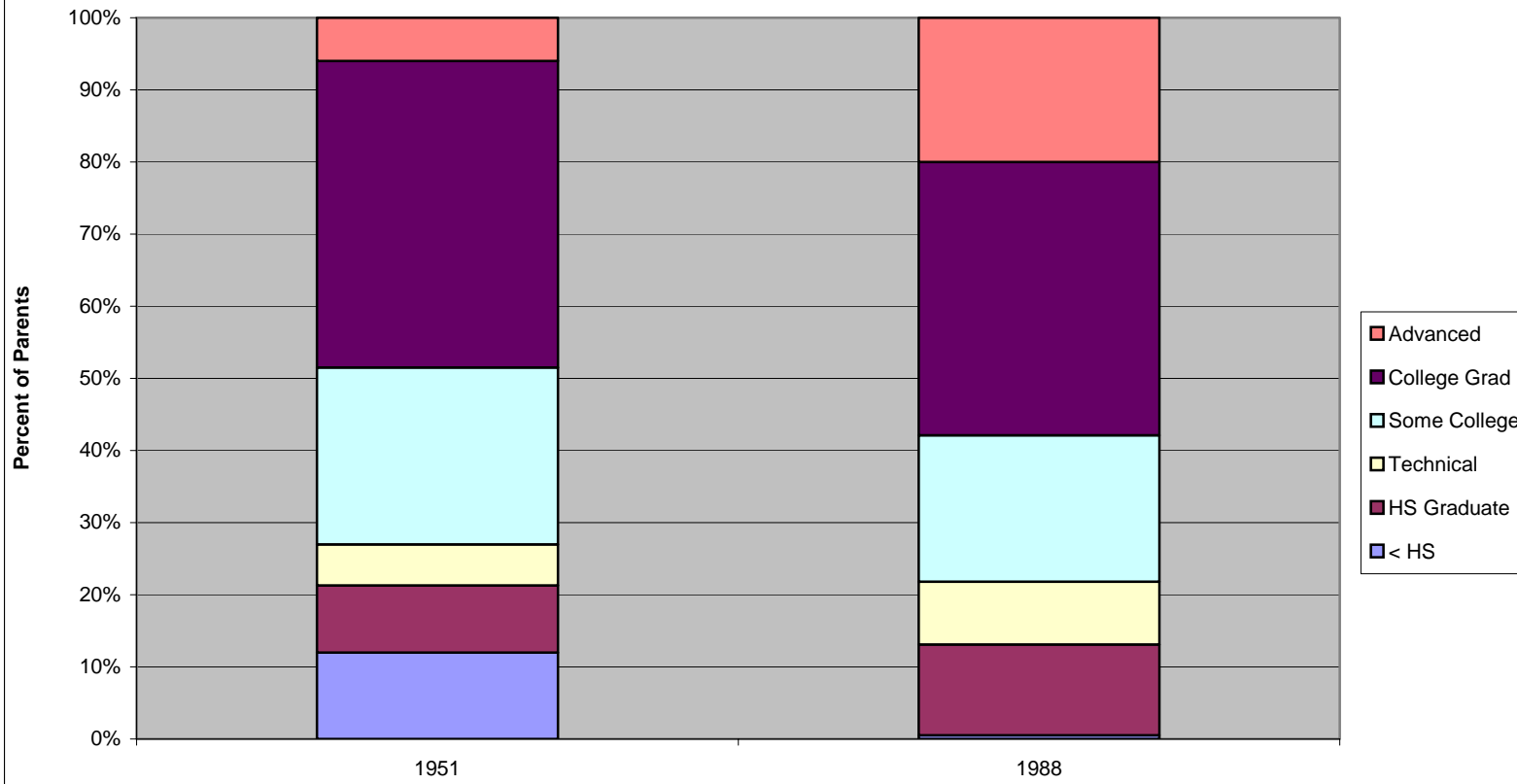
Source: 1951-52 Patterns of Child Rearing, Sears, Maccoby, and Levin
1963 Detroit Area Study Litwak and Meyer
1991 National Household Education Survey, National Center for Education Statistics
2001 National Household Education Survey, National Center for Education Statistics

Figure 5.2: School Enrollments by Level of Schooling, 1900-2000



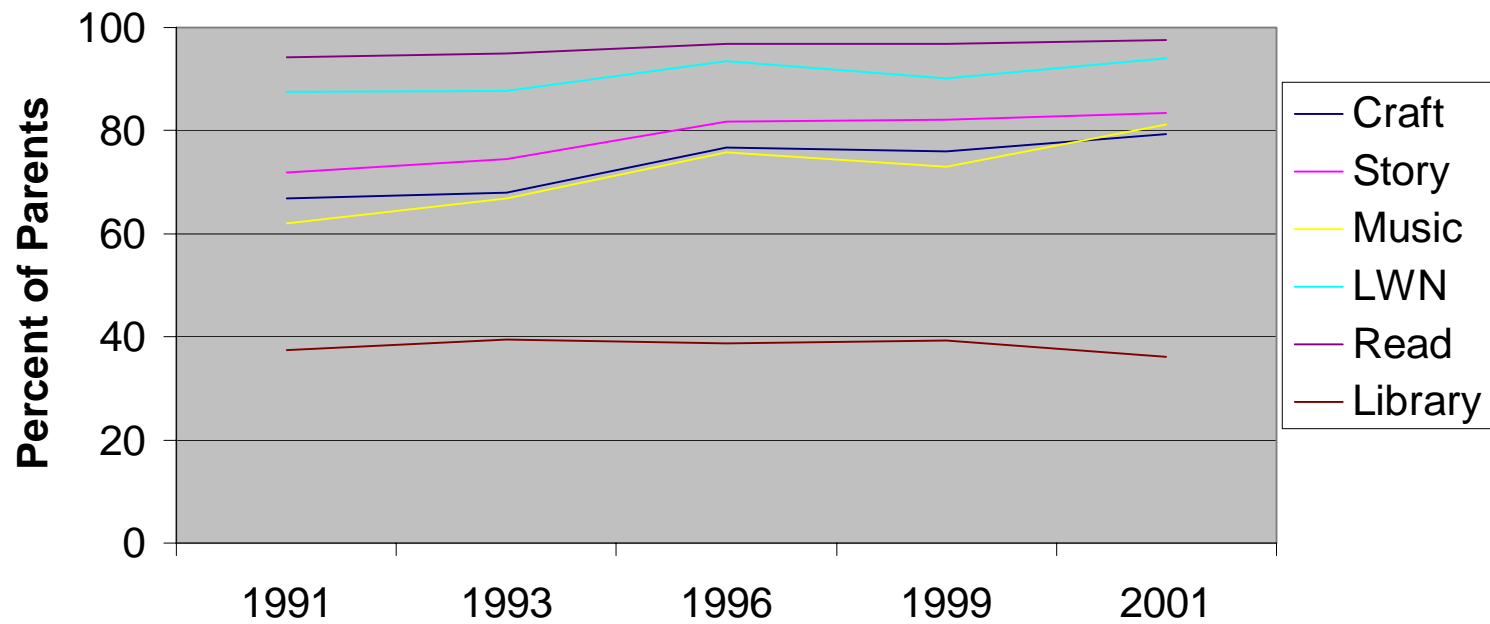
¹ Source: 1900-1950 *Historical Statistics of the United States Colonial Times to 1970*, U.S. Department of Commerce for elementary and high school enrollments and *Historical Statistics of the United States Colonial Times to 1957*, U.S. Department of Commerce for undergraduate enrollments. 1960-2000 *Current Population Survey*, U.S. Census Bureau

**Figure 5.3: Parent Expectations for Child's Schooling
1951 and 1988**



Source: 1951-52 Patterns of Child Rearing, Sears, Maccoby, and Levin
1988 National Education Longitudinal Study, National Center for Education Statistics

Figure 5.4: Parent Reports of Engagement in Cognitive Activities with Young Children at least once per Week, 1991-2001



Source: 1991 National Household Education Survey, National Center for Education Statistics
 1993 National Household Education Survey, National Center for Education Statistics
 1996 National Household Education Survey, National Center for Education Statistics
 1999 National Household Education Survey, National Center for Education Statistics
 2001 National Household Education Survey, National Center for Education Statistics

Chapter 6

Trends in Household Income, Mothers' Education and

Parenting Cognitive Development

The two prior chapters established that *parenting cognitive development* had become normative behavior among parents over the second half of the 20th century. The results in those chapters also support the hypothesis that parent education is associated with this trend. Specifically, families with higher levels of maternal education engage in *parenting cognitive development* more frequently and there has been a dramatic increase in education levels among American women during this period.

In this chapter, I first document some descriptive trends by household income and mothers' education in the long historical trend from 1951 to 2001, then I present the Hierarchical Logistic Model which adds an interaction between year and household income, and year and mothers' education to the models presented in Chapter 5 as well as letting the value of the latent construct *parenting cognitive development* vary across people. Lastly, I present a heuristic analysis that demonstrates the relative contribution of educational expansion and micro educational effects to the overall increase in *parenting cognitive development*.

Socioeconomic Differences in Parental Involvement

There is a well-documented relationship between family SES and parental involvement in schooling. This research literature continually documents the advantage middle class children have over their working class counterparts in schooling and the contribution of involved parents to this advantage (Lareau 1989, Stevenson and Baker

1987). Other research has questioned the established link between family SES and parental involvement in schooling (Ho and Willms 1996). Recently, the parental involvement research literature has investigated ways in which parents attempt to create advantage for their children outside the formal school setting (Dunn, Kinney and Hofferth 2001, Hofferth and Sandberg 2001, Lareau 2003, Weininger and Lareau 2002).

In *Home Advantage* Lareau argues the inter-institutional linkages between home and school are crucial to school success in the US system. Acknowledging the well-documented finding that SES has a substantial impact on school success (e.g. Coleman 1966, Jencks et al 1972) and parental involvement has an impact on school success (Stevenson and Baker 1987), Lareau looks at the impact of SES on parental involvement. She finds middle and upper middle class parents have resources at their disposal which they activate to enhance the educational experiences of their children. Middle and upper middle class children have an advantage in school, according to Lareau, because schools are middle class institutions which promote a middle class definition of parental involvement. For example, Useem (1992) demonstrated this advantage by showing college educated parents are more likely to be knowledgeable about and participate in decision making of mathematics track placement of their children.

More recently research has illustrated the increase in participation in structured activities by children (Hofferth and Sandberg 2001), the large differences in participation in structured activities by SES, the added stress to families created by this participation, and gender differences in parental responsibility for these activities (Weininger and Lareau 2002). Lareau (2002) argues that middle class parents use 'concerted cultivation' to foster talents through organized activities and extensive reasoning. However, it is not

only class differences in participation in activities which interests Lareau, it is also the way in which middle class parents and especially mothers monitor and intervene on the behalf of their children. Institutional relationships created by middle class parents on behalf of their children differ from those of working class children especially with regards to expectations of individualization (Lareau 2003). Research has also shown middle class parents use after school activities to instill values and enhance desirable qualities in their children (Dunn, Kinney and Hofferth 2003). This research acknowledges the important role parents play in determining a child's future and the implications family SES has on opportunity.

Ho and Willms (1996) provide an interesting contrast to the research documenting the relationship between SES and parental involvement in schooling. They argue there is little support for the claim that low SES parents are less involved than high SES parents. They identify four dimensions of parental involvement and find that, of the four, home discussion had the strongest relationship to academic achievement but SES was only moderately related to home discussion, as well as school communication and school participation and not related to home supervision. These are particularly intriguing results given the contrary findings to other parental involvement research but also given the results presented in earlier chapters of this dissertation showing the penetration of *parenting cognitive development* into the entire population. Ho and Willms suggest that all parents use parental involvement in schooling as a way in which to create advantage for their child in schooling. This chapter examines the differences by household income and mothers' education in *parenting cognitive development* as well as the trend over time in the hypothesized gap.

Mothers' Education, Household Income and *Parenting Cognitive Development*

In Chapter 4 I showed that by 2001 *parenting cognitive development* of young children had become a normative part of parenthood in the U.S. A driving force behind the spread of normative behavior has been the successive rise in education of the American mother; in 2001 mothers' median education was some years of college or an associates degree. These mothers were most likely to respond they had read to their child everyday last week, taught letters, word and numbers with their young child, taught music and songs to their young child, did arts and crafts with their young child and told their young child a story three or more times last week. In 2001 *parenting cognitive development* was normative behavior and mothers' education is a predictor of *parenting cognitive development* while household income is not. This suggests the driving force has been the education of mothers not family SES as measured by economic resources.

Evidence from Chapter 5 shows that along with the rise of mass education in the latter half of the 20th century, parents became increasingly involved in *parenting cognitive development* which ultimately reached a normative state by the end of the century. Parent behaviors with regard to children's cognitive development changed considerably over the second half of the 20th century. Parents increasingly engaged in cognitively based activities with young children so that by 1991 a large proportion of parents were engaging in these types of activities. From 1991 to 2001 the proportion of parents engaging in *parenting cognitive development* continued to increase but at a slower pace because such a high proportion were already engaging in these activities.

These results demonstrate the penetration of the norms of mass schooling into the

family. As increasingly larger proportions of the population went to school and stayed in school longer, *parenting cognitive development* was added to the parenting role.

Schooling as a powerful institution in modern society shapes parenting. This includes creating the role of ‘parent as teacher’ and the subsequent change in our notions of appropriate behaviors for young children.

Next I present descriptive trends in indicators of *parenting cognitive development* and household income and *parenting cognitive development* and mothers’ education over the long historical period from 1951 to 2001. Here I am interested in differences by indicators of SES in *parenting cognitive development* and the relationship of indicators of SES to year in *parenting cognitive development*.

Descriptive Trends in Mothers’ Education, Household Income and *Parenting Cognitive Development*

Recall from previous chapters that two indicators from historical data sets are similar to components of *parenting cognitive development*, an indicator from Patterns of Child Rearing 1951-52 which measures frequency of a parent teaching cognitive skills to their young child before kindergarten and an indicator from the Detroit Area Study (DAS) 1963 that measures frequency of reading to your young child before kindergarten. I compare these with indicators from the National Household Education Survey (NHES) 1991 and 2001 and examine trends in the relationship between household income and *parenting cognitive development*, and mothers’ education and *parenting cognitive development* over time.

- *Hypothesis 4a: Analyses over time will show an increasing trend of parenting cognitive development in young children for all family income categories, although families within high income categories will historically begin at a higher start point.*
- *Hypothesis 4b: Analyses over time will show an increasing trend of parenting cognitive development in young children for families in all categories of maternal education, although families within high maternal education categories will historically begin at a higher start point.*

Table 6.1 depicts differences in frequency of reading to a child¹⁸ by income category in 1963 and 1991. Recall, 1963 data come from the Detroit Area Study (DAS) and 1991 come from the National Household Education Study (NHES); the reading question in each survey is similar but the response categories are slightly different. In 1963 they read 'never,' 'a few times a year or less,' 'once or twice a month,' 'once or twice a week' and 'almost everyday.' In the 1991 they read 'never,' 'several times per year,' 'several times per month' 'more than three times per week' and 'everyday.' Each response category in 1991 requires slightly more reading than the corresponding response categories in 1963. Also, it should be pointed out that there could be more error in the estimates from the DAS63 because parents of 5th and 6th graders were asked to recall their general behavior from before their child started kindergarten rather than specific behavior from last week.

A significant proportion of all parents report frequently reading to their child, however, important differences emerge over time and by income. First, the proportion of

¹⁸ In the DAS63, parents of 5th and 6th graders are asked about the year before their child entered kindergarten. In the NHES91, I limit the analysis to preschool age children.

parents who report ‘never’ reading to their child diminishes greatly by 1991.¹⁹ In addition, within years there is a positive relationship between income category and frequency of reading to your child such that within the bottom quartile 34% and 32% of parents report reading to their child ‘almost everyday’ in 1963 and 1991 respectively as compared to the top quartile where 48% and 56% report reading to their child ‘almost everyday.’ The relationship between household income and parent reports of frequency of reading to your child is not as strong as one might expect though and the increase over the thirty-eight year time period is also modest.

Table 6.2 depicts the change over time in parents’ time spent teaching young children cognitive skills by family income. This figure uses the Patterns of Child Rearing 1951-52 and the National Household Education Survey (NHES) for 1991 and 2001 and compares available components of *parenting cognitive development*. Patterns of Child Rearing 1951-52 asked parents if they engaged in teaching reading words, writing the alphabet, drawing, or telling time before their child entered kindergarten. The NHES asked parents if they engaged in teaching letters, words or numbers. Although the questions and response categories are not identical across the selected surveys, I believe they measure the same underlying dimension of parents teaching early literacy and numeracy skills. The 1951 parents were asked to reflect on their behavior with their child in the year prior to kindergarten entrance and 1991 and 2001 parents were asked to reflect on their behavior last week. To make the response categories comparable I recoded the responses in 1951 data from a five-point scale to a three point scale by combining 2 and 3, and 4 and 5 (see Table 5.1 for frequencies and percentages of the

¹⁹ I choose NHES91 because it is the only NHES which includes a reading question similar to the DAS63. Each of these data sets asks parents to respond within a one year time period.

original coding scheme). I make the conservative assumption that parents with more moderate teaching engagement could consider themselves in the ‘considerable’ category because there were no specific behavioral guidelines in the 1951 data. Therefore, 1951 data could over estimate the top response category.

Note the dramatic decline in the percentage of parents responding ‘not at all’ from 1951 to 2001 in all three categories of household income. In addition, the percent of parents responding ‘considerable’ increased dramatically in all three categories of income between 1951 and 2001. However, other interesting trends emerge by income category. Note also the differing relationship between income category and parent reports of frequency of teaching cognitive skills in these three time points. Similar trends are found within all income categories in 1991 and 2001. However, in 1951 the trend for the top quartile is quite different than the other two. Here, parents are much more likely to respond ‘not at all.’ This may indicate that in 1951 elite parents were much more confident of the child’s potential for maintaining elite status regardless of parent behaviors (Stephenson 1951).

Table 6.3 again uses the DAS63 and the NHES:91, this time to demonstrate the trends in frequency of reading to your child by mothers’ education in 1963 and 1991. This table shows that a high percentage of parents are reading to their child regularly in both 1963 and 1991. Regardless of year, more educated mothers read more frequently to their child. But the comparison across years seems difficult and this may be partially caused by the difference in response categories that makes the 1991 an underestimate. However, it is also due to the unexpectedly high proportion of parents of modest education and income who report frequently reading to their child.

Table 6.4 again uses Patterns of Childrearing 1951-52 and the NHES 1991 and 2001 to illustrate the trends in the frequency of parents engaging in teaching cognitive skills with young children but this time by mothers' education. This table shows that the percentage of parents reporting they taught their young child cognitive skills increased from 1951 to 2001. In addition, interesting trends emerge by mothers' education categories. In 2001, the percentage of parents reporting they taught cognitive skills to young children increased slightly with each increase in category of mothers' education. However, this is not the case in 1951. In 1951, highly educated parents were the least likely to report doing 'considerable' teaching of cognitive skills to their young children. In addition, mothers in the 'high school diploma or less' category were the most likely to report teaching their young child cognitive skills.

Evidence from Tables 6.1 through 6.4 suggest that parent engagement in cognitive activities with their young children rose regardless of income category or mothers' education category. Frequency of reading to your child increased within income category and mothers' education within year and although it was quite high in 1963 it inched upward in 1991. This is especially evident in the dramatic reduction in the percentage of parents responding 'never' or a 'few times a year or less' within the category of mothers with a 'high school diploma or less.' Teaching cognitive skills to your young child has a different trend pattern. In 2001, the trend is inching up with income category and mothers' education but frequency is quite high in all categories. In 1951, as income category and mothers' education increase, frequency of teaching cognitive skills to your young child decrease. The general pattern indicates an overall increase in parent engagement in cognitive activities with young children by household

income and mothers' education over time but with some surprises. These are perhaps most evident in the lower categories of household income and mothers' education at the earlier time period where the frequency for the indicator of *parenting cognitive development* is perhaps higher than expected. For example, Hypotheses 4a and 4b predict that parents within high income categories and high education categories will historically begin at higher start points of indicators of *parenting cognitive development* than parents of low income and education categories. This turns out not to be the case for teaching cognitive skills to your young child where in 1951 mothers within the low household income and education categories are more likely to teach cognitive skills to their young child whereas in 2001 more educated or higher income parents appear slightly more likely to teach cognitive skills to their young child. Neither of these trends is evident in 1991. In addition, patterns for frequency of reading to your young child are higher than expected for low maternal education and household income.

Mothers' Education, Household Income and the Larger Trend in *Parenting Cognitive Development*

Data spanning the 1951 to 1991 period indicate a dramatic increase in parenting behavior related to cognitive development than can be seen by just looking at the ten year period from 1991 to 2001. While this trend continues, as I have shown through the ten year period spanned by the NHES data collection, it had clearly become normative behavior by the first data collection in 1991. Descriptive data from Chapter 5 as well as the beginning of this chapter indicate *parenting cognitive development* has increased rather dramatically in the fifty year time period from 1951 to 2001. These data show that

education expanded rapidly in the 20th century and suggest that with the expansion came an educated set of parents influenced by mass education and familiar with its norms. The penetration of schooling into the family expanded as larger proportions of the population participated in school and stayed in school longer so that familiarity with the norms of schooling legitimated the role of ‘parent as teacher.’ A demonstration of this rests on the ability to compare parenting behavior across fifty years. Attempts like this to show a trend over time are challenging because you must find comparable data. This historical case has two advantages: the phenomena appear massive and rapid and the outcome manifests itself in clear, detectable behaviors on the part of parents.

To test these ideas further I develop a multivariate model of *parenting cognitive development* that compares the relative effects of mothers’ education and household income, controlling for other characteristics of the family and child. My argument about the penetration of education into the family as a main cause of *parenting cognitive development* suggests that the effect of mothers’ education should increase over historical time and be more influential than household income.

- *Hypothesis 4c: Analyses over time will show an increase in the effect of mothers’ education on parenting cognitive development.*
- *Hypothesis 4d: Analyses over time will show a greater effect of mothers’ education than household income on parenting cognitive development.*

I sifted through numerous data sets from 1950-2000 to find comparable indicators of *parenting cognitive development*. Table 6.5 uses Patterns of Child Rearing 1951-52,

the Detroit Area Study 1963 and the National Household Education Survey 1991 and 2001 and reports the OLS standardized regression coefficients of indicators of *parenting cognitive development* on household income and mother's education for separate analyses 1951 to 2001. I use the available indicator as the dependent variable so that, for example, in 1951, frequency of parents teaching reading, writing the alphabet, drawing, and telling time is used while in 1963 frequency of reading to your child is used. In 1991 and 2001 the scale of *parenting cognitive development* is used. While the dependent variable in 1951 and 1963 are not identical to each other or to the scale used in 1991 and 2001, each is a component of the scale of *parenting cognitive development*. The 1963 reading indicator could be problematic because as shown in Tables 5.3, 6.1 and 6.3, by 1963 a large proportion of parents are already reading regularly to their child. The analyses include all possible consistent control variables. For example, in 1951 the entire sample consisted of two parent households, stay at home mothers of white five year olds enrolled in kindergarten. Therefore, I controlled for gender and number of siblings. In 1963, number of parents in the household, work status, number of siblings, age, gender, and race/ethnicity were included because all subjects were enrolled in 5th or 6th grade. Both 1991 and 2001, mothers' work status, number of parents in the household, number of siblings, child's age, gender, race/ethnicity, and school enrollment were held constant.

The analyses show that mothers' education becomes a better predictor of *parenting cognitive development* over time. Also, household income in 1951 has a significant negative relationship but relationship becomes positive and loses its predictive power. This is a very interesting because mothers' education and household income are not working together and in the same direction. These trends are important because as I

argue, mass education creates the role of ‘parent as teacher’ and mothers’ education is a good indicator of the penetration of mass education into the family.

The Interaction of Year with Mothers’ Education and Household Income

This section examines the most recent part of the trend from 1991 to 2001, by which most parents are undertaking some amounts of *parenting of cognitive development* with their young children. I continue to explore the role of mothers’ education in *parenting cognitive development* as this behavior becomes more normative. I ask several questions of these data. First, what is the relationship of household income and mothers’ education with *parenting cognitive development* over these ten years? Second, do either of these two relationships change over the ten year period?

- *Hypothesis 4e: Although high income families will maintain an overall higher rate in parenting cognitive development, low income families will show a higher rate of increase and therefore the trends converge over time.*
- *Hypothesis 4f: Although families with more educated mothers will maintain an overall higher rate in parenting cognitive development, families with less educated mothers will show a higher rate of increase and therefore the trends converge over time.*

A test of Hypotheses 4e and 4f requires an examination of the interaction of time and household income and time and mothers’ education. Although a test over a longer period of time would be preferable, the NHES data are well suited to exploring these

interactions because they have identical variables over the ten year span from 1991 to 2001. Because item response data can be viewed as having a two level structure, I use a two level hierarchical logistic regression model where the first level is the six item responses of the components of *parenting cognitive development* nested within individuals and the second level describes the variation and covariation among individuals. The first level models the log-odds of an affirmative response as a linear function of item indicators. The second level includes person level predictors of *parenting cognitive development* and makes a few important additions to the models of previous chapters. First, interaction terms for time and household income and time and mothers' education were constructed. Here, year was treated as a continuous variable centered so 1991 equals zero and all other years equal Year – 1991. Household income was recoded to 5,000, 15,000, 25,000, 35,000, 45,000, 62,500, and 85,000, converted into 1991 dollars and the log was taken (see Chapter 3 for more detail). Income was then centered and multiplied by the centered year. Mothers' education was also centered and multiplied by the centered year.

Table 6.6 shows the results of the hierarchical logistic regression. This table shows the effects at the second level of year, household income and mothers' education all remain significant and positive controlling for demographic and family background variables. The first interaction term of year by household income is not significantly different from zero. The results show that the association between household income and *parenting cognitive development* had a magnitude of .039 logits in 1991 and the relationship did not significantly change over the ten year period. The second interaction term of year by mothers' education is significant and small yet negative. Specifically, the

results show that the association between education and *parenting cognitive development* had a magnitude of .133 logits in 1991 and declined by .003 logits per year. Over the ten year period, the estimated association between maternal education and *parenting cognitive development* declined by 23%. This is a significant decline in the impact of maternal education on *parenting cognitive development*. A comparison of the most and least educated mothers in 1991 shows mothers with at least ‘some graduate school’ are .665 logits more likely to engage in *parenting cognitive development* than mothers with ‘less than a high school diploma.’ The decline of .003 logits per year per unit of maternal education yields a .15 logits decline in 2001 as compared to 1991 and reveals in 2001 mothers with ‘some graduate school’ are .515 logits more likely to engage in *parenting cognitive development* than mothers with ‘less than a high school diploma.’ These results show that over the ten year period from 1991 to 2001 there is a 23% decrease in the overall effect of maternal education.

Mothers’ education and household income are two important features of family SES that are often used to explain family differences in parental involvement in schooling. These results show that families with highly educated mothers are more likely to engage in *parenting cognitive development* in both 1991 and 2001. However, they also show that the gap has narrowed in the ten year period. Interestingly, households with more income are also more likely to engage in parenting cognitive development in both 1991 and 2001, but household income has a much smaller effect than mothers’ education and the effect does not significantly change over time. As seen in previous chapters, mothers’ education is the driving force in *parenting cognitive development*, however, its influence on *parenting cognitive development* is diminishing over time.

A Heuristic Model

One final analysis illustrates the combination of social forces behind the trends in *parenting cognitive development*. The preceding analysis explains the continuing (but diminishing) effect of the mothers' education within the family. This last section asks: what is the overall educational effect on *parenting cognitive development* from the expansion of education for women in the population and the micro process of mothers with more education undertaking this behavior toward their young children?

Table 6.7 is an estimate of the relative contribution of the expansion of education among mothers and the increase in *parenting cognitive development* for each education level from 1991 to 2001 using the NHES data. Column one is the percentage of mothers in each of three education levels. Column two is the group mean in *parenting cognitive development* and column three is the estimated relative contribution of each group to the total amount of *parenting cognitive development* in the sample. The estimate was derived by multiplying column one by a numeric assignment to each of the three categories of years of school completed (17, 13, and 12 respectively), the product was multiplied by column two and then made into a percentage of the total as shown in column three.

The comparison of column three by year reveals an interesting trend. The most educated mothers contribute 27% to the total *parenting cognitive development* in 1991 but by 2001 this has increased to 36%. Similarly, the contribution of the least educated mothers' drops from 44% to 36% over the same period.

Comparing these columns reveals several other important trends. First, as shown earlier in this chapter, the trend in *parenting cognitive development* is increasing for all

categories of mothers' education between 1991 and 2001 and is greatest for the highest levels of education or mothers with a 'bachelors degree or more,' but the ten year *rate of increase* is greatest for the lowest categories of education or mothers with a 'high school degree or less.' This increase is intensified by the increase in education among mothers in just ten years; notice the percent of the sample population in each category of education. While the middle category or 'technical/vocational school or some college but less than a bachelor's degree' remains remarkably consistent, there is a decline in the percent of the sample population with a 'high school degree or less' and an increase in the percent of the population with a 'bachelor's degree or more.'

The heuristic model shows that the considerable joint effects of the expansion of education among mothers and the rising mean participation in *parenting cognitive development* in the ten year period from 1991 to 2001

Conclusions on the Interaction of Year with Mothers' Education and Household Income

The first part of this chapter examined trends in *parenting cognitive development* by household income and mothers' education over the long historical period. The descriptive results suggest that parent engagement in cognitive activities with their young children rose regardless of income category or mothers' education category. Data from the DAS63 and NHES:91 show the frequency of reading to your child was already quite high by 1963 but continued to inch upward within each category of income and mothers' education as well as between categories of income and mother's education. Interestingly, data from Patterns of Child Rearing 1951-52, NHES:91 and NHES:01

show that in 1951 mothers within the low household income and education categories were more likely to teach cognitive skills to their young child. In addition, in 2001 more educated or higher income parents appear slightly more likely to teach cognitive skills to their young child but this is not evident in 1991.

Multivariate analyses over the long historical trend from 1951 to 2001 show that mothers' education becomes a better predictor of *parenting cognitive development* over time. In addition, household income in 1951 has a significant negative relationship but the relationship becomes positive and loses its predictive power over time.

Results leading up to the multivariate analysis of the short historical trend from 1991 to 2001 suggest a significant interaction year and household income and year and mothers' education. The hierarchical logistic regression shows the main effect of household income is smaller than mothers' education. Mothers' education as a main effect remains robust, but the interaction of mothers' education and year is significant and negative indicating a reduction in the effect of mothers' education over time.

The final examination of the mean of *parenting cognitive development* by mothers' education reveals the important role the expansion of education has in the rise of *parenting cognitive development* over the ten year period from 1991 to 2001. The mean *parenting cognitive development* is rising fastest in the lowest category of mothers' education, but in addition, the percentage of the sample population in the lowest category of mothers' education is declining. That is, a larger proportion of the population is being exposed to the institutionalized norms and legitimized roles of education for longer periods of time. If this trend were to continue, in another ten years there would be less than a one point difference in the mean of the scale of *parenting cognitive development*

between the category of mothers with 'bachelor's degree or more' and a 'high school diploma or less.' But in addition, an even smaller percent of the population would be in the category of 'high school diploma or less' and a greater percentage would be in the category 'bachelor's degree or more.'

Table 6.1: Percentage of Parents Reporting Reading to their Young Child Before Formal Schooling by Household Income, 1963 (N=1521) and 1991 (N= 5058)

Quartile	Year	
	1963	1991
<u>Lower 25%</u>		
Never	11.3	1.7
A few times a year or less	6.7	3.5
Once or twice a month	13.1	20.7
Once or twice a week	34.9	42.2
Almost everyday	34	31.8
<u>Middle 50%</u>		
Never	8.2	1.0
A few times a year or less	8	2.0
Once or twice a month	10.4	13.0
Once or twice a week	35.4	37.4
Almost everyday	38	46.5
<u>Upper 25%</u>		
Never	4	0.2
A few times a year or less	5.8	1.0
Once or twice a month	11.1	9.3
Once or twice a week	31.7	33.4
Almost everyday	47.5	56.2

Source: Detroit Area Study, Litwak and Meyer, 1963
National Household Education Survey, National Center for Education Statistics, 1991

Table 6.2: Percentage of Parents Reporting Teaching their Young Child Before Formal Schooling by Household Income, 1951 (N=364), 1991 (N=5137) and 2001 (N=3906)

<u>Quartile</u>	<u>Year</u>		
	<u>1951</u>	<u>1991</u>	<u>2001</u>
<u>Lower 25%</u>			
Not at all	39	13.2	8.3
Some	49.5	24.1	20
Considerable	11.4	62.8	71.7
<u>Middle 50%</u>			
Not at all	41.7	11.6	5
Some	50.3	27.7	20.6
Considerable	7.9	60.8	74.4
<u>Upper 25%</u>			
Not at all	62	14.1	5.6
Some	32.4	27.6	17.2
Considerable	5.6	58.3	77.2

Source: Patterns of Child Rearing, Sears, Maccoby, and Levin, 1951-52
 National Household Education Survey, National Center for Education Statistics, 1991
 National Household Education Survey, National Center for Education Statistics, 2001

Table 6.3: Percentage of Parents Reporting Reading to their Young Child Before Formal Schooling by Mothers' Education, 1963 (N=1519) and 1991 (N= 4962)

<u>Mothers' Education</u>	<u>Year</u>	
	<u>1963</u>	<u>1991</u>
<u>High School Diploma or less</u>		
Never	8.4	1.7
A few times a year or less	7.4	3.5
Once or twice a month	11.5	19
Once or twice a week	35.1	40.9
Almost everyday	37.5	34.9
<u>Less than a Bachelor's Degree</u>		
Never	2.2	0.2
A few times a year or less	4.3	1.2
Once or twice a month	9.7	12.0
Once or twice a week	19.4	38.6
Almost everyday	64.5	48.0
<u>Bachelor's Degree or more</u>		
Never	0	0
A few times a year or less	3.4	0.6
Once or twice a month	0	6.0
Once or twice a week	34.5	27.7
Almost everyday	62.1	65.7

Source: Detroit Area Study, Litwak and Meyer, 1963
National Household Education Survey, National Center for Education Statistics, 1991

Table 6.4: Percentage of Parents Reporting Teaching their Young Child Before Formal Schooling by Mothers' Education, 1951 (N=375), 1991 (N=5011) and 2001 (N=3815)

<u>Mothers' Education</u>	<u>Year</u>		
	<u>1951</u>	<u>1991</u>	<u>2001</u>
High School Diploma or less			
Not at all	39.7	13.4	5.8
Some	49.7	25.2	22.8
Considerable	10.6	61.4	71.4
<u>Less than a Bachelor's Degree</u>			
Not at all	52.7	11.2	6.6
Some	41.1	27.6	17.2
Considerable	6.3	61.3	76.1
<u>Bachelor's Degree or more</u>			
Not at all	54.8	14.1	5.2
Some	40.5	27.5	17.7
Considerable	4.8	58.4	77.1

Source: Patterns of Child Rearing, Sears, Maccoby, and Levin, 1951-52
National Household Education Survey, National Center for Education Statistics, 1991
National Household Education Survey, National Center for Education Statistics, 2001

Table 6.5: Standardized Beta Coefficients for OLS regressions of *Parenting Cognitive Development* on Household Income and Mothers' Education, 1951-2001

	Year			
	<u>1951</u>	<u>1963</u>	<u>1991</u>	<u>2001</u>
Household Income	-.18**	.8**	.04*	-.005
Mothers' Education	-.02	.10***	.17***	.17***

* P < .05
 ** P < .01
 *** P < .001

Source: Patterns of Child Rearing, Sears, Maccoby, and Levin, 1951-52
 Detroit Area Study Litwak and Meyer, 1963
 National Household Education Survey, National Center for Education Statistics, 1991
 National Household Education Survey, National Center for Education Statistics, 2001

Table 6:6: Hierarchical Logistic Regression of *Parenting Cognitive Development* on the Interaction of Year*Household Income and Year*Mothers' Education, 1991-2001 (N=25,953)

	Coefficient	S.E.	t-ratio
Year	0.040***	0.003	12.843
Total Household Income	0.039*	0.016	2.485
Year x Household Income	0.002	0.003	0.719
Mothers' Education	0.133***	0.008	17.136
Year x Mother's Education	-0.003*	0.001	-2.204
Number Sibs in HH	-0.046***	0.007	-6.798
Mothers' Employment			
Looking for Work	-0.027	0.034	-0.782
Part-time	-0.075***	0.019	-3.838
Fulltime	-0.253***	0.017	-14.762
Number of Parents in HH	0.021	0.018	1.142
Child's Age	-0.078***	0.008	-9.213
Child's Gender	-0.125***	0.014	-8.959
Race/Ethnicity			
Other	-0.059	0.033	-1.800
Hispanic	-0.228***	0.021	-11.101
Black	-0.104***	0.023	-4.456
Enrollment in School	0.036*	0.017	2.105
Intercept	-0.275***	0.021	-13.197

* P < .05

** P < .01

*** P < .001

Source: National Household Education Survey, National Center for Education Statistics, 1991
National Household Education Survey, National Center for Education Statistics, 1993
National Household Education Survey, National Center for Education Statistics, 1996
National Household Education Survey, National Center for Education Statistics, 1999
National Household Education Survey, National Center for Education Statistics, 2001

Table 6.7: The mean of the scale of *Parenting Cognitive Development* and percent of the population by categories of Mothers' Education, 1991 and 2001

<u>1991</u>	<u>% of the sample population</u>	<u>mean</u>	<u>% contribution</u>
Bachelor's Degree or more	18.6	8.07	27
Some College or Vocational/Technical	29.1	7.43	29
High School Diploma or Less	52.3	6.66	44
<u>2001</u>			
Bachelor's Degree or more	26.8	9.12	36
Some College or Vocational/Technical	28.9	8.57	28
High School Diploma or Less	44.3	7.93	36

Source: National Household Education Survey, National Center for Education Statistics, 1991
National Household Education Survey, National Center for Education Statistics, 2001

Chapter 7

Demographic Changes and the Trend in *Parenting Cognitive Development*

Dramatic changes in U.S. families have taken place in the past century. These include changes in family demography, which have been popular explanations for changes in parenting. The three preceding chapters have demonstrated the high proportion of parents engaging in cognitive activities with their young children at the turn of the 21st century, the increase in parent participation in cognitive activities with young children over the second half of the 20th century and the robust effects of year and mothers' education in *parenting cognitive development* as well as the significant negative interaction of year and mothers' education. In this chapter I describe the main trends in family demography and the rise in female educational attainment over the 20th century. As an alternative to my educational thesis, I assess the possibility that these demographic trends alone are related to the hypothesized trend in *parenting cognitive development* in young children.

First I present demographic trends spanning over the 20th century from the macro data set I have constructed. Next I examine the relationship of demographic factors to the increase in *parenting cognitive development* during the last decade of the 21st century. Using indicators of the three main demographic trends in family, I assess the relative contribution of each to *parenting cognitive development* during the 1991 to 2001 period. Specifically, I look at the relative contribution of family size, mothers' employment status, and number of parents in the household. I compare these to mothers' education.

Finally, I compare the contribution of family demography and mothers' education to the trend in *parenting cognitive development*.

Family Demography

Many important and interrelated changes in the demography of U.S. families have taken place over the course of the 20th century; these include changes in both marriage and divorce rates, fertility, educational attainment and employment outside the home (Cherlin 1983, Hernandez 1993). Indeed, social historians like Aries (1962) argued changing demography elevated the status of children within the family. Specifically, some argue that declines in the infant mortality rate during the 19th century increased emotional commitment to children and spurred an interest in their development.

According to Aries, these trends began among the elite classes and trickled down to the working classes over time. More recently, changes in family demography have been explored as possible casual mechanisms in creating changes in children's lives. In fact, changes in demography have been blamed for a crisis in childhood; busy parents opting to turn on the television rather than read to children, single mothers placing too much domestic responsibility on young children, and overscheduled children spending more time in daycare and organized activities than free play (Elkind 1981 & 1987, Meyrowitz 1981, 1984 & 1985, Popenoe 1993, Postman 1982, Suransky 1982). But these explanations have only had moderate success (e.g. Bianchi and Robinson 1997, Hofferth and Sandberg 2001, Lynott and Logue 1993). Indeed, much of this research that has looked for demographic explanations for changes in children's use of time but has been met with limited success.

The fertility rate is a prime example of a dramatic demographic change that has affected families in modern times. In the United States it has declined dramatically since 1800 (Coale 1974). At the beginning of the 20th century, the majority of children grew up in families with 5 or more children but currently the majority of children grow up in families of one to three children. The family size revolution has been attributed to social, economic and political changes that have taken place since the beginning of the Industrial Revolution. Emerging social and economic opportunities increased the costs while reducing the benefits of having children and encouraged couples to reduce family size in order to enhance their social and economic status. Caldwell (1982) argues declining fertility is a result of rational decisions made by couples in industrialized societies. In traditional societies children were advantageous because they contributed labor as children and young adults. However in industrialized societies children are more costly and consume resources and therefore low or no fertility is a rational choice. For the Lynds (1929), declining rates of fertility in the early 20th century as well as technological shifts from an agrarian to an industrialized economy, were central to understanding the conditions of family life that shaped general parental orientations to children.

Table 7.1 depicts the Total Fertility Rate²⁰ over the 20th century, note the fluctuations. In 1900 women averaged 3.8 births over their lifetime but by 1930 this had dipped to 2.5. In 1960 the Total Fertility Rate rose again to 3.7 births per woman but by 1980 it dropped to 1.8 before increasing to 2.1 by 2000. The rapid decline in fertility occurred in the first part of the 20th century. The peak seen in the 1960 time period is a special circumstance related to the post Depression/World War II economic boom (Ryder

²⁰ The Total Fertility Rate (TFR) is expressed as the number of births that 1000 women would have in their lifetime if at each age they experienced the birth rate of that year (above figures x 1000).

1980). By the end of the century, the overall downward trend in fertility appears more stable.

The family size revolution has had both positive and negative consequences. One negative consequence is the reduction in the number of possible companions an individual might have during childhood and throughout adulthood. However, children compete with siblings for parents' attention and resources, and research shows children from small families receive more education (Blau and Duncan 1967, Blake 1989) and achieve occupations with relatively high social status and income during adulthood (Blake 1981). In time use studies, subjects record in diaries the amount of time devoted to each activity over the course of the day and research shows children from large families do not differ from their small family counterparts in their time use except that they do more housework (Bianchi and Robinson 1997) and spend more time watching TV (Hofferth and Sandberg 2001).

The structure of U.S. families has also changed during the century. For about 150 years between 1800 and 1950 a large and relatively stable proportion of about 33 percent of children spent part of their childhood with less than two parents in the home. Mortality was replaced by separation and divorce in the first part of the 20th century but the proportion of children affected remained stable (Bane 1976). The divorce rate increased most rapidly during the 1970s, peaked in the 1980s, and reached a plateau since then. Estimates currently range from 4 to 5 divorces for every ten marriages. In addition, the link between marriage and child bearing and rearing has weakened (Cherlin 1988)

and rising separation and divorce rates as well as the increase in out-of-wedlock child bearing has dramatically increased the number of children who will ever live with less than two parents. This is significant because children of one parent families are more likely to experience 1) lower family incomes 2) higher personal or parental stress 3) more school related, health and behavioral problems 4) fewer years of education, lower status occupations and lower incomes in adulthood (Furstenberg et al 1983, Hernandez 1986). Garfinkel and McLanahan (1986) argue the cause of the large increases in mother only families is due to earnings opportunities. These differ by race; for whites, the dramatic increase in female labor force participation created economic independence for women; for blacks, the decline in male employment opportunities reduced the economic gains of marriage and undermined the role of males as breadwinner. Interestingly, trends in time use for children living in single parent households are similar to those living in two parent households (Hofferth and Sandberg 2001).

Column two of Table 7.1 depicts the trends in the percentage of families that are headed by a female from 1940 to 2000. Note the stability of the trend from 1940 to 1970 at between 9 and 11 percent of all families before the dramatic increase to 24% that occurred between 1970 and 1990. This increase appears to have slowed some by 2000 when fully 26% of all families were headed by females.

Female headed households have important implications for parenting in a number of respects. For example, in *Single Women and their Children* Garfinkel and McLanahan (1986) document the growing relationship between female-headed households and poverty. A majority of children now spend at least part of their childhood in a female-headed household. For white children this is most commonly due to separation, divorce

or death but for African American children this is primarily due to out of wedlock birth and about half of all those children are dependent on welfare. This is particularly problematic because on average these children are less successful when they become adults, more likely to drop out of school, to give birth out of wedlock, to divorce or separate, and to become dependent on welfare when they are adults. There is widespread concern over the feminization of poverty and many argue the government is not doing enough (Jones and Kondras 1990). Others claim the government has already done too much and argue that increases in welfare and welfare dependence are the result of the expansion of social programs of the 1960s (Bosworth 1980). These issues are particularly complex because the social programs designed to give aid to the poor have always intended to encourage work and self reliance with one exception. One stated goal of U.S. federal welfare policy in the first half of the 20th century was to enable female heads of households to remain at home with their young children. The goal was achieved in the 1960s with the War on Poverty and programs like AFDC. However, it was accompanied by a general shift in attitude about whether welfare mothers should work as the general characteristics of poor single women changed from predominantly white and widowed to about 50% black and predominantly divorced, separated or never married (Garfinkel and McLanahan 1986).

A third change in the demography of the U.S. family is work; in the last 150 years it has undergone two transformations. Until 1840 two thirds of children lived in families in which both parents and children lived and worked together to support the family but the Industrial Revolution increased the proportion of breadwinner fathers who worked at jobs away from home (Tilly and Scott 1978). Mothers subsequently became

homemakers who remained in the home to care for children and perform other domestic functions. A majority of children still lived in this type of family setting between 1920 and 1970 but even when the breadwinner-homemaker family was in its heyday, a second transformation had begun.

Between 1920 and 1970 the proportion of children living in two parent farm families declined as the proportion living with breadwinner mothers who worked away from home was increasing. Female labor force participation has increased for all age categories from 16 to 64. It has increased for single and married women as well as women with children in all age categories. Column 3 of Table 7.1 depicts the dramatic increase in married female labor force participation²¹ over the course of the 20th century. In 1900 approximately 6% of all married women worked outside the home. The increase in married female labor force participation began slowly before taking off in the middle part of the century so that by 2000 62% of all married women worked outside the home. Additional information can be gleaned from looking at employment figures for women with children. For example, by 1997 80% of women with children in the 14-17 age group worked outside the home. Similarly, 61% of women with children under the age of three worked outside the home in 1997.

The increase in female labor force participation has been affected by and has implications for childcare. Two dramatic transformations have taken place in childcare, first for children age 6 and over and then for younger children. New social policy during the 20th century made school attendance compulsory and created child labor laws to protect children. This resulted in the rapid expansion of schooling during the 20th

²¹ Represents women 15+ from 1900-1930, 14+ from 1940-1960, and 16+ from 1970 onward.

century. It also reduced the amount of time required for mothers to care for children and contributed to the large increase in mothers' labor force participation. This was true for preschoolers as well as school age children and after 1940 the proportion of children with no parent at home during the day skyrocketed (Oppenheimer 1970, Smith 1979). Thus child care has dramatically changed in the past century, first as increasing proportions of children spent larger amounts of time in school and then as children were cared for by someone other than a parent. Time use studies indicate mothers' time spent on child care as a primary activity increased in the first part of the century but declined between the 1960s and 1980s as female labor force participation rose (Gershuny and Robinson 1988). In addition, some research indicates mothers not employed outside the home spend about twice as much time engaged in activities with children than mothers in the labor force (Timmer, Eccles and O'Brien 1985).

Research on the rise in female labor force participation highlights various consequences for children. For example, Parcel and Menaghan (1994) find no support for Belsky and Eggebeen's (1991) claim that mothers should stay at home and important nuances to Kohn's (1969) claim that job conditions affect parents' child rearing values. They find job complexity has an impact on home environments and home environment is an important pathway for the transmission of advantage. Specifically, Parcel and Menaghan find that mothers able to maintain favorable working conditions over time bring important resources to the family, which enhance child outcomes. Conversely, unfavorable work conditions retard these resources and actually hinder child outcomes. However, maternal employment affects children's time during the school year (Hofferth and Sandberg 2001). Children spend more time in daycare if they live with an employed

mother and as a result they spend less time in other activities including reading, sleeping, eating, watching TV, playing, and going to church. Other analyses conclude there is little difference in time use of children with stay at home mothers when compared to working mothers with one notable exception. Children with mothers who work part-time watch less TV than children of stay at home mothers (Bianchi and Robinson 1997) and mothers who work part-time have higher levels of parental involvement in schooling than mothers who work full-time or stay at home, and their children have higher achievement (Muller 1995). One interesting note, in an analysis of trends over time, Hofferth and Sandberg (2001) found converging trends in the time use of children with working and nonworking mothers.

Three important demographic trends affecting U.S. families have been presented here. Each constitutes a dramatic trend over the 20th century. The decline in fertility and the rise in female headed households and female labor force participation each represent a significant change in U.S. families. In addition, each has been linked to changes in childhood. Here I speculate on the possibility that demography alone is responsible for the increases in *parenting cognitive development* noted in earlier chapters.

Schooling as an Indicator of the Institutional Power of Education

I argue schooling is a powerful institution in modern society capable of transforming the role of parenting through notions of childhood. Demographic arguments have had only mild success in explaining changes in childhood. For example, recent research by family demographers shows largely similar trends in time use for children from large and small families (Bianchi and Robinson 1997, Hofferth and

Sandberg 2001) as well as converging trends in time use for children of working and non working mothers (Hofferth and Sandberg 2001). Like family size, number of parents in the household and female labor force participation, schooling has changed dramatically in the 20th century. As an alternative to a demographic argument, the increase in mothers' education can be viewed as an indicator of the larger expansion and institutionalization of education in modern society.

Years of formal education increased dramatically over the course of the 20th century. It increased greatly for successive cohorts of children born since the mid 1920s, especially for those born since the mid 1930s. Schooling has expanded dramatically in the last 100 years both in the proportion of the population attending school and the number of years attended (U.S. Department of Education, U.S. Census Bureau). Column 4 of Table 7.1 depicts the rise in female median years of schooling over the 20th century. Over the course of the century, the median years of schooling for the entire population rose from approximately 8.1 in 1910 to 12.7 in 1990. Available data for females from 1940 on shows a nearly identical trend, rising from 8.8 in 1940 to 12.7 in 1990. Similarly, total high school completion rates grew from 14% in 1910 to 84% in 2000. For females, the rates grew from 26% in 1940 to 84% in 2000. Rates for completion of four or more years of college show similarly dramatic increases. In 1910, 3% of the total population completed four or more years of college. In 1940, 4% of females completed four or more years of college. By 2000 this grew 26% of the total population and 24% of the female population.

Beyond high school, family origin is influential and educational opportunities are less equal. This is important because mothers' and fathers' educational attainment has an

important impact on their children's later adult outcomes. For example, highly educated parents tend to value self-direction, autonomy and independence in their children, characteristics that are advantageous in occupations marked with high social prestige and incomes. In comparison, parents who have completed fewer years of schooling tend to value conformity and obedience to externally imposed rules, characteristics that are a disadvantage in obtaining and keeping high prestige and high income occupations (Kohn 1969). Other research has found that more educated parents limit TV viewing and encourage reading and studying more than less educated parents (Bianchi and Robinson 1997) and make greater 'investments' in their children as signified by children's time used in studying, reading, and participation in structured activities and hobbies (Hofferth and Sandberg 2001). However, some research has shown better educated parents overestimate their children's engagement in socially desirable behaviors like reading and underestimate their children's engagement in socially undesirable behaviors like TV viewing (Hofferth 1999). Most interesting though, is evidence that like family composition and female labor force participation, trends in children's time use from 1981 to 1997 were similar for children of mothers with no college education and some college education (Hofferth and Sandberg 2001).

Family SES, and in particular mothers' education, along with ability and motivation are the best predictors of children's educational success (Coleman 1966, Jencks et al 1972). The dramatic rise in parental education attainment, therefore, has important implications for how parents pursue cognitive development in young children. For example, Lareau (1989), and Baker and Stevenson (1986) find more educated parents are more likely to be involved in children's education. Important behaviors related to

children's academic success such as supervising homework and intervening in schooling are more commonly displayed by more educated parents and especially more educated mothers. However, this research also finds that all parents value education and want their children to succeed but educated parents are more comfortable and/or more familiar with the school environment (Lareau 1989). However, research in parental involvement in education does not address long term trends in SES and mothers' education in particular.

Demographic changes over the 20th century have had a tremendous impact on the U.S. family. Many of these changes happened rapidly and have had lasting implications for the family as a primary institution of socialization. Indeed, these changes have also had an impact on modern parenting and may have an impact on the increase in *parenting cognitive development*. Some demographic trends like the decline in fertility are often cited as causes of the intensification of parenting among the middle classes (Alwin 1996). Other demographic changes like the rise in single parent households and the rise in female labor force participation are cited as contributors to the crisis in childhood (Elkind 1981).

There is no doubt demographic changes contribute to changes in our notions of childhood as a developmental stage and therefore a range of appropriate activities attached to the stage. But are they the sole or primary cause? I argue that demography alone cannot account for the hypothesized focus on the parental pursuit of cognitive development in young children. Demographic changes set the stage for *parenting cognitive development*; they make it one possibility. For example, the decline in fertility may give mothers more time to dedicate to each child but reduced fertility does not

determine how the extra time will be used. Similar arguments could be made about number of parents in the household as well mothers' labor force participation.

The relative contribution of demographic indicators and mothers' education to *parenting cognitive development*

I argue that the institutionalization of education determines the amount of time parents spend engaged in cognitive activities with young children. One powerful indicator is the rising level of mothers' education in U.S. families. To test this idea, Table 7.2 compares the effects of three demographic indicators of the family as well as mothers' education and household income on the scale of *parenting cognitive development* while controlling for age, gender, race/ethnicity and school enrollment. Recall the scale of *parenting cognitive development* is comprised of six indicators of parent engagement in cognitive activities with young children. I use five waves of the NHES data from 1991 to 2001. Then I look at the overall trend in *parenting cognitive development* without the family demographic indicators but controlling for individual demographic characteristics of age, gender, race/ethnicity and school enrollment. Next I add the three demographic indicators in U.S. families separately, and look at their combine contribution. Then, I add mothers' education to the model and finally, I add household income. Model 7 is similar to Table 5.18; I present this model again to emphasize the comparison of mothers' education with demographic indicators and each indicator's contribution to the explanation in the trend in *parenting cognitive development* from 1991 to 2001.

- *Hypothesis 5a: Three indicators of family demography, number of children in the household, mothers' employment and number of parents in the household contribute to the explanation of parenting cognitive development.*
- *Hypothesis 5b: Mothers' education contributes more to the explanation of parenting cognitive development than indicators of family demography.*
- *Hypothesis 5c: The trend of greater parenting cognitive development from 1991 to 2001 is more attributable to mothers' education than indicators of family demography.*

Models 2 through 5 show the addition of number of siblings, mothers' employment and number of parents in the household separately and all together explain very little of *parenting cognitive development*. Model 2 shows number of siblings is significant and negative. However, the reduction of *parenting cognitive development* associated with each additional sibling is small. Model 3 shows the comparison of stay at home mothers to mothers looking for work, working part-time and working full-time. Only full-time employment is significantly different from zero and the reduction of *parenting cognitive development* associated with full-time work is modest; overall the effect of mothers' employment is not significantly different from zero. Model 4 shows the comparison of two parent households with no parent and single parent households. Both no parents in the household and single parent households have significant and negative impacts on *parenting cognitive development* but the reduction of *parenting cognitive development* associated with number of parents in the household is modest. Some of these traditional family demography variables are significant and in the direction

expected, however, none of the effects is large; one interesting result, stay at home mothers do not have an overall significant, positive impact on the trend in *parenting cognitive development*. Hypothesis 5a predicts that indicators of family demography will contribute to the explanation of *parenting cognitive development*, while some of these indicators have a significant, negative effect on *parenting cognitive development*, they are modest and only weakly support this hypothesis.

Model 6 adds maternal education; comparing the standardized coefficient for this variable with the coefficients for each of the family demography variables indicates that maternal education has a larger effect on *parenting cognitive development*. The relative contribution of year and mothers' education to explaining the variance in *parenting cognitive development* is greater than any other variable, and the addition of mothers' education represents the largest increase in R^2 at .022 (significance of F change .001). The effect of mothers' education is five times larger than family size, single parent households and household income and twice as large as mothers' full-time work. Hypothesis 5b predicts that mothers' education will contribute more to the explanation *parenting cognitive development* than indicators of family demography and this is the case. Mothers' education, along with year, contributes more to the explanation of *parenting cognitive development* than the inclusion of any other variable in the model.

Next I examine the effects of family demography and maternal education on the trend in *parenting cognitive development*, as addressed in hypothesis 5c. Model 1 shows the effect of which year a parent was interviewed; as year increases by 3.56, *parenting cognitive development* increases by 0.171 standard deviations. For every increase of three and one half years, *parenting cognitive development* increases by 0.457 points,

while holding age, gender, race/ethnicity and school enrollment constant. The year coefficient remains significant and positive across the seven models indicating that irrespective of characteristics of children and families there continues to be an increasing trend in *parenting cognitive development*.

The inclusion of all three indicators of family demography in Model 5 does not reduce the trend in *parenting cognitive development* either. For example, after including number of siblings, mothers' employment and number of parents in the household the effect of year remains unchanged (actually increasing slightly).

Model 6 shows that maternal education does reduce the effect of year some, as predicted by hypotheses 5c. Adding maternal education reduces the effect of year by 7%. Like family demography, model 7 shows that family income does not reduce the effect of year when family and individual characteristics are held constant as well as mothers' education. Ultimately, the addition of mothers' education reduces the coefficient of year more than any other variable examined here.

Conclusion

Many important demographic trends occurred over the 20th century and some have had important implications for families. These included the decline in fertility, the rise in married female labor force participation, and the rise in female headed households. Demographic trends are often cited as contributing to the social construction of childhood in modern society. However, this chapter shows that demographic indicators are not nearly as influential as mothers' education in the amount of time parents spend engaged in cognitive activities with young children. This suggests that education as powerful

institution in modern society plays an important role in shaping parents' notions of appropriate activities to engage in with young children. In addition, family size, female labor force participation and number of parents in the household contribute nothing to explanation of the trend in *parenting cognitive development* in the ten year span from 1991 to 2001. Mothers' education contributes more to the explanation of the trend in *parenting cognitive development* than any other variable in the model but the effects are modest. These results suggest that the rise of mass education in modern society and in particular the increases in female educational attainment have important implications for parenting behavior. The previous chapter showed that the effects of mothers' education diminished from 1991 to 2001 but these results show that mothers' education still helps to explain a modest portion of the continuing upward trend in *parenting cognitive development*.

Table 7.1: Changing Social and Educational Conditions of U.S. Women, 1900-2000

	<u>Total Fertility Rate</u>	<u>% Female Headed Families</u>	<u>% Married Women in the Labor Force</u>	<u>Female Median Years of School Completed</u>
1900	3.8	NA	5.6	NA
1910	NA	NA	10.7	NA
1920	3.3	NA	9	NA
1930	2.5	NA	11.7	NA
1940	2.2	11.2	15.6	8.8
1950	3.0	9.4	23	9.6
1960	3.7	10.0	31.7	10.7
1970	2.5	10.8	40.2	12.1
1980	1.8	19.4	49.9	12.4
1990	2.1	24.2	58.3	12.7
2000	2.1	25.8	62.2	NA

Source: 1900 (1905) *The First Measured Century*, Caplow et al
 1920-90 *Datapedia of the United States 1790-2005*, Kurian
 2000 National Center for Health Statistics for TFR

Source: 1940-70 *Historical Statistics of the United States, Colonial Times to 1970*, U.S. Department of Commerce
 1980-2000 *Statistical Abstracts*, U.S. Census Bureau for all other

Table 7.2: OLS Standardized Beta Coefficients of the Scale of *Parenting Cognitive Development* as a Comparison of Family Demography and Mass Education Indicators, 1991-2001 combined (N=26,738)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
+Year	.171*** (.128)	.171*** (.128)	.174*** (.130)	.173*** (.130)	.175*** (.131)	.162*** (.122)	.162*** (.121)
Family Demography							
Number Sibs in HH		-.020***			-.038***	-.028***	-.028***
Mothers' Employment							
Looking for Work			-.008		-.005	.002	.004
Part-time			.008		.005	-.011	-.012
Fulltime			-.053***		-.058***	-.075***	-.079***
Number of Parents in HH							
No Parent in HH				-.018**	-.018**	-.006	-.004
1 Parent in HH				-.067***	-.055***	-.030***	-.020**
Mass Education							
Mothers' Education						.162***	.153***
Family Resources							
Household Income							.029***
Control Variables							
Child's Age	-.105***	-.102***	-.103***	-.103***	-.097***	-.081***	-.081***
Child's Gender	-.060***	-.060***	-.057***	-.059***	-.057***	-.056***	-.056***
Race/Ethnicity:							
Other	-.022***	-.022***	-.021***	-.018**	-.018**	-.021***	-.020***
Hispanic	-.145***	-.144***	-.150***	-.138***	-.142***	-.108***	-.105***
Black	-.099***	-.099***	-.097***	-.074***	-.075***	-.061***	-.056***
Enrollment in School	.062***	.060***	.062***	.061***	.058***	.028***	.026***

Constant	8.552	8.595	8.641	8.599	8.769	8.069	7.203
R ²	.068	.068	.072	.072	.076	.098	.098

* P < .05

** P < .01

*** P < .001

+(unstandardized coefficient)

Source: National Household Education Survey, National Center for Education Statistics, 1991
 National Household Education Survey, National Center for Education Statistics, 1993
 National Household Education Survey, National Center for Education Statistics, 1996
 National Household Education Survey, National Center for Education Statistics, 1999
 National Household Education Survey, National Center for Education Statistics, 2001

Chapter 8

Parenting Cognitive Development and the Social Construction of Parenthood

This dissertation addresses social change with regard to parent behavior and children's cognitive development. Childhood, as a distinct developmental stage with special meaning attached to it, emerged in the modern period. Since then our notions of childhood have evolved and subsequently the activities we view as appropriate for young children have been altered. One result of the evolution of the social meaning of childhood is the addition of cognitive activities as age appropriate for young children; another is the addition of cognitive developer to the assumed parenting role of young children. As the evidence here strongly suggests, this role has been institutionalized as a result of the rise of mass schooling.

Social historians argue that our conception of childhood, which attaches special meaning to this stage and where children are at the center of family life, is a modern invention (Aries 1962, Shorter 1975). This transformation of daily life from public to private and evolving notion childhood as a separate developmental stage intensified the relationship between parent and child (Stone 1977). Family and schooling are our main institutions of socialization and as such each has a key role in the integration of the child into society. This dissertation demonstrates that one crucial piece to the socialization process of young children is cognitive development. In addition, cognitive development in young children is not solely the domain of early childhood education; rather, it is now part of the assumed parenting role. I call this continual, purposeful engagement by parents with young children *parenting cognitive development*. I have argued that the

dramatic increase in *parenting cognitive development* over the second half of the 20th century is largely attributable to the rise of mass schooling accompanied by its role in the public legitimization of cognitive performance as a central individual and collective resource in modern society.

Social historians attribute the enhancement of children's status to various causal mechanisms. But the most frequently occurring themes in the literature point to the influence of family demography and much less frequently, the rise of mass schooling. In particular, the decline of infant mortality is often cited as a contributor to increased emotional commitment of parents toward children (i.e. Shorter 1975). In addition, some historians argue that these trends began first in the upper classes and slowly trickled down to the working classes (i.e. Aries 1962, Shorter 1975, Stone 1977). Demography is one counter explanation to the institutional perspective presented here and demographic trends are often cited as contributing to the social construction of childhood in modern society. Important changes have taken place in family demography, which are often cited as the primary causal mechanisms for changes in children's lives. They include the decline in fertility, the rise in married female labor force participation, and the rise in female headed households. But demographic trends alone do not explain our evolving notions of childhood and the activities which should accompany it. A demographic explanation, for example, might argue that a reduction in family size gives parents more free time and causes parents to engage more frequently in cognitive activities with young children. However, it does not explain the choice of cognitive activities over other types of activities.

A few social historians note that the dramatic changes in children's lives were brought about in part by the rise of mass schooling (Aries 1962, Chudacoff 1989, Hopkins 1994, Stone 1977). Schooling, they argue, separated children from adult society (Aries 1962), so that by the second half of the nineteenth century education dominated children's lives (Hopkins 1994) and led to heightening distinctions between age groups (Chudacoff 1989). Chapter 7 shows that demographic variables are not nearly as influential as mothers' education in the amount of time parents spend engaged in cognitive activities with young children. These results add a new dimension to previous scholars' depictions of the means by which the rise of mass schooling altered children's lives. In this light, in addition to the direct impact of mass schooling on children's lives, schooling also has an indirect effect on the lives of children through the schooling of previous generations.

In this dissertation, 2001 represents the historical endpoint of *parenting cognitive development* and the data establish its normative nature by then. Data over the second half of the 20th century reveal the emerging trend. The descriptive analyses in Chapter 5 show that over the second half of the 20th century, parents increasingly engaged in cognitively based activities with young children. In addition, these analyses show that by 1991 a large proportion of parents were engaging in these types of activities and that from 1991 to 2001 the proportion of parents engaging their young child in cognitive activities continued to increase.

This trend follows the rise in formal schooling for the average parent in the U.S. Historical data on school enrollments and school attainment show the dramatic expansion of secondary education over the 20th century and the similarly dramatic expansion of

higher education beginning about 1940. Likewise, adult female median years of schooling increased over the 20th century. These initial descriptive results imply that the rise in *parenting cognitive development* coincides with the expansion of education in the U.S and the increase in parent expectations for children's school attainment.

Multivariate analyses from the long historical period of 1951 to 2001 enhance our understanding of the role of mass education in the increase in *parenting cognitive development*. They show that mothers' education becomes a better predictor of *parenting cognitive development* over the second half of the 20th century. Also, household income in 1951 has a significant negative relationship but the relationship becomes positive and loses its predictive power over time. Both the OLS and logistic analyses of the short-term trend from 1991 to 2001 show that the effect of year is significant and positive. Parents are more likely to engage in *parenting cognitive development* and the individual components of *parenting cognitive development* in 2001 than in 1991 with the exception of visiting the library, which has a much more static trend.

Parent engagement in cognitive activities with young children is now pervasive. Chapter 4 illustrates the extensive amount of time parents spent engaging young children in cognitive activities by 2001. It shows nearly 100% of parents read to their young child at least once last week and 94% taught them letters, words or numbers at least once last week in 2001. Furthermore, more than 84% of parents report reading to their child three or more times last week and more than 74% of parents report having taught letters, words and numbers three or more times last week. In each instance with the exception of visiting the library, about 80% or more of parents report engaging in each of the components of parenting cognitive development at least once last week and 45% to 84%

of the parents report having engaged their young children three or more times last week. This evidence makes it abundantly clear that contemporary parents spend a considerable amount of time engaging their young children in cognitive activities.

The near universal pursuit of these activities by parents with their young children in 2001 are aimed at strengthening cognitive skills assumed to be needed for success in school and they represent the normative endpoint of the historical construction of childhood that has evolved through the last century. They represent the culmination of an historical trend that through the last fifty years has resulted in a significant addition to the parenting role in modern society. The results demonstrate the penetration of the norms of mass schooling into the family. Schooling as a powerful institution in modern society shapes parenting. This includes creating the role of 'parent as teacher' and the change in our notions of appropriate activities for young children.

Education as a powerful and dynamic institution in modern society creates the role of 'parent as teacher.' As increasingly larger proportions of the population went to school and stayed in school longer, *parenting cognitive development* spread through the population of parents. Additional mechanisms probably assisted in this spread later in the process. They may include public policy such as parental involvement in schooling and the school readiness campaign, and expert literature such as parent magazines. This enabled *parenting cognitive development* to become normative behavior yet continue to increase to near saturation of the entire population.

Socioeconomic status patterns within the trend of *parenting cognitive development* further illuminate the crucial role of the rise of mass education in *parenting cognitive development*. The research literature in parental involvement would suggest

that higher SES parents are more likely to engage in *parenting cognitive development* than low SES parents and in fact in 2001 families with higher income and higher levels of mothers' education were more likely to engage in *parenting cognitive development* than families with less household income. However, important distinctions within family SES emerge. Multivariate analyses of this normative behavior reveal that in 2001, mothers' education is a predictor of *parenting cognitive development* while household income is not. In other words, the driving force has been the education of mothers not family SES in the economic sense. This further reinforces our understanding of the impact of schooling expansion on modern life.

In Chapter 6, the descriptive results suggest that parent engagement in cognitive activities with their young children rose regardless of income category or mothers' education category. Frequency of reading to your child inched upward within categories of income and mothers' education as well as between categories of income and mothers' education. Interestingly, teaching cognitive skills to young children has a slightly different pattern. In 1951 mothers within the low household income and education categories were more likely to teach cognitive skills to their young child. However, in 2001 more educated or higher income parents appear slightly more likely to teach cognitive skills to their young child but this is not evident in 1991.

Results leading up to the multivariate analysis suggest a significant interaction of year and household income and year and mothers' education. And indeed, a hierarchical logistic regression of the short historical period shows a decline in the effects of mothers' education from 1991 to 2001. These results are in contrast to the results from the long historical trend which show that mothers' education becomes a better predictor of

parenting cognitive development over the second half of the 20th century. Two things are happening here. First, separate analyses over the second half of the 20th century show the increasing penetration of the norms of schooling into the family through increasing levels mothers' education among the entire cohort. Second, combined analyses over the ten year span from 1991 to 2001 show that at the tail end of the century, *parenting cognitive development* is normative behavior and the effects of mothers' education on differences among parents are declining. Trends in school expansion discussed previously shed additional light on this. First, frequencies reveal the percentage of the sample population in the lowest categories of mothers' education is declining over time and the percentage in the top categories of mothers' education is increasing over time. That is, larger proportions of the population are being exposed to the institutionalized norms and legitimized roles of education for longer periods of time. This knowledge makes both trends plausible. This in combination with the larger increase in mean *parenting cognitive development* for families in the lowest categories of mothers' education as compared to the highest categories of mothers' education from 1991 to 2001 suggests that these behaviors are in fact increasing more rapidly in families with less educated mothers and the trends are converging. Results from Chapter 7 show that from 1991 to 2001 demographic indicators do not explain much of the trend in *parenting cognitive development* and that maternal education is more influential than any other variable in the model but its effects are modest. In other words, as a normative behavior, at the end of the 20th century *parenting cognitive develop* spread through families regardless of characteristics of children and families.

Consequently, this dissertation shows mothers' education is an important variable in the rise and spread of *parenting cognitive development*. Over the second half of the 20th century it became an increasingly better predictor of *parenting cognitive development* and continued to be a significant positive predictor of *parenting cognitive development* in the last decade of the 20th century. However, as *parenting cognitive development* reached normative behavior in 1991, the effects of mothers' education began to decline and the trend by mothers' education began to converge. The norms of schooling and legitimized role of 'parent as teacher' had seeped into the entire population and therefore all parents were increasingly engaging in *parenting cognitive development*. In the last decade of the 20th century, families with less educated mothers began closing the gap.

Theoretical Implications

The historical trends and evidence for the cause of *parenting cognitive development* in young child have consequences for several important sociological issues. A major institutional quality of modern mass schooling is that it has become increasingly meritocratic (Meyer 1977). Stratification research investigates the ways in which individuals are sorted legitimately by achievement and illegitimately by social background through the schooling process regardless of official attempts at equality of educational opportunity. Parental involvement in schooling is one widely discussed means by which parents attempt to create advantage for their children in schooling. In general, the parental involvement in schooling research literature shows that the addition of a second person to help supervise and guide school age children through the education

process is beneficial to a child's school career. It also shows that middle and upper middle class parents are more likely to use this strategy than working class parents. This suggests that *parenting cognitive development* may also be a means by which parents attempt to create advantage for their child but prior to formal schooling.

Status competition is one way in which researchers have explained how the existing class structure is reproduced. The results here are relevant to this theoretical framework. Collins (1978) demonstrated status competition in U.S. schooling using years of schooling, but a similar argument can be applied to parental involvement. Middle class parents find new and additional ways to participate in the education of their children; as parental involvement in schooling becomes more common, middle class parents seek additional ways to create advantage for their children. *Parenting cognitive development* is one new and additional way in which parents participate in the education of their children. The evidence here shows that middle and upper class parents have increased the amount of time they spend engaging in *parenting cognitive development*. In addition they also show that as working class parents adopted this vehicle for creating advantage, middle and upper class parents have increased their engagement in *parenting cognitive development*. The components of *parenting cognitive development* further suggest that as activities like reading to your child or teaching cognitive skills spread through the entire population of parents, additional activities like singing songs and telling stories were added and began to spread through the entire population as well. In 2001 there was still a significant difference in the amount of time parents spent engaging in *parenting cognitive development* by mothers' education level.

This evidence clearly shows a trickle down effect as described by social historians on the emergence of childhood as a specific developmental stage but with one interesting exception. In 1951 working class parents were much more likely than middle class parents to teach their young child cognitive skills before entering kindergarten. This exception illustrates the need for further historical data on the components of *parenting cognitive development* to gain further insight into the process by which middle class parents acquired behaviors from their working class counterparts and then increased and expanded them.

Cultural capital is a second way in which researchers have explained how the existing class structure gets reproduced. Parental involvement in schooling is one form of cultural capital (Lareau 1989) and hence *parenting cognitive development* can also be considered a form of cultural capital. The evidence presented here shows families with more educated mothers' are more likely to engage in *parenting cognitive development*, that is, their extensive experience with schooling gives them a better understanding of institutionally created role of 'parent as teacher' and therefore an advantage over families with less educated mothers.

Each of these plausible processes addresses the vehicle by which *parenting cognitive development* spreads through a population and influences social reproduction along the way, but it is only one part of the story. An institutional perspective addresses its origins and normative nature. Neo-institutional theory argues institutions are not only powerful but also dynamic; society is made up of a series of interlocking institutions that can change (Meyer 1977). Institutions as well as individuals create social meaning. Although other approaches view education as a process of socialization, training,

allocation, and social reproduction, a central assumption of neo-institutional theory is that through these processes education shapes society by classifying people into socially constructed and institutionally embedded categories with distinct social status. In other words, schooling creates new roles for modern society in a number of expanded ways over time. The evidence here shows the role of parenting of children is impacted by the schooling process. The expansion of education over the course of the 20th century has meant that increasingly larger proportions of the population went to school and stayed in school longer and resulted in significantly larger proportion of the population exposed to the norms and legitimized roles of schooling.

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Appendix A: 1951 Patterns of Child Rearing
Means and Standard Deviations
(N=379)

Variable	Mean	Std. Deviation
Household Income	4.29	1.673
Mother's Education	3.98	1.504
Teach before School	2.04	1.112
Child's Gender	1.47	.500
Number of Siblings	2.63	1.170

Source: Patterns of Child Rearing, Sears, Maccoby, and Levine, 1951-52

Appendix B: 1963 Detroit Area Study
Means and Standard Deviations
(N=1536)

Variable	Mean	Std. Deviation
Household Income	4.91	3.111
Mother's Education	3.16	1.012
Read to Child	2.91	1.223
Number of Siblings	3.0633	2.15643
Child's Age	11.52	.777
Child's Gender	.51	.500
Child's Race/Ethnicity	1.0448	.21389
Mother's Employment	.3185	.62579
Number of Parents in Household	1.7943	.40435
Education Aspirations	3.9492	1.26492

Source: Detroit Area Study Litwak and Meyer, 1963

Appendix C: 1991 National Household Education Survey
Means and Standard Deviations (N=7655)

Variable	Mean	Std. Deviation
Total Household Income	2.4690	1.83689
Mother's Education	2.0018	1.49841
Read to child last week	2.0664	.92907
Dichotomous Read to Child	.4088	.49166
Taught child letters, words, numbers	1.4979	.70613
Dichotomous Words, Letters, Numbers	.6222	.48489
Taught child songs/music in last week	.9761	.85658
Dichotomous Songs and Music	.3551	.47859
Told child a story in last week	1.0848	.80024
Dichotomous Told Story	.3661	.48179
Arts and crafts with child in last week	1.0017	.81526
Dichotomous Arts and Crafts	.3331	.47138
Dichotomous Visit Library	.3745	.48405
SCALE1	7.0037	2.74993
Number Sibs in Household	1.4394	1.22503
Enrollment in School or Equivalent	.6105	.48769
Child's Age	4.20	.987
Child's Gender	.5204	.49963
Child's Race/Ethnicity	.4965	.84288
Mother's Employment Status	.90	.992
Number of Parents in Household	1.77	.438

Source: National Household Education Survey, National Center for Education Statistics, 1991

Appendix D: 1993 National Household Education Survey
Means and Standard Deviations (N=6583)

Variable	Mean	Std. Deviation
Total Household Income	2.4809	1.89714
Mother's Education	2.0258	1.50258
Read to child last week	2.2334	.91234
Dichotomous Read to Child	.5093	.49996
Taught child letters, words, numbers	1.4802	.70451
Dichotomous Words, Letters, Numbers	.6035	.48921
Taught child songs/music in last week	1.0359	.83543
Dichotomous Songs and Music	.3675	.48216
Told child a story in last week	1.1478	.79927
Dichotomous Told Story	.4042	.49077
Arts and crafts with child in last week	1.0004	.80152
Dichotomous Arts and Crafts	.3213	.46703
Dichotomous Visit Library	.3946	.48880
SCALE1	7.2922	2.66715
Number Sibs in Household	1.4081	1.10395
Enrollment in School or Equivalent	.6304	.48275
Child's Age	4.17	.977
Child's Gender	.5207	.49961
Child's Race/Ethnicity	.5319	.86874
Mother's Employment Status	.92	.960
Number of Parents in Household	1.70	.499

Source: National Household Education Survey, National Center for Education Statistics, 1993

Appendix E: 1996 National Household Education Survey
Means and Standard Deviations (N=4421)

Variable	Mean	Std. Deviation
Total Household Income	2.6847	1.97885
Mother's Education	2.0772	1.55048
Read to child last week	2.3316	.84116
Dichotomous Read to Child	.5423	.49825
Taught child letters, words, numbers	1.6685	.59439
Dichotomous Words, Letters, Numbers	.7344	.44171
Taught child songs/music in last week	1.2488	.81890
Dichotomous Songs and Music	.4906	.49995
Told child a story in last week	1.3457	.76920
Dichotomous Told Story	.5284	.49924
Arts and crafts with child in last week	1.1802	.78410
Dichotomous Arts and Crafts	.4137	.49254
Dichotomous Visit Library	.3880	.48733
SCALE1	8.1624	2.56115
Number Sibs in Household	1.3640	1.14425
Enrollment in School or Equivalent	.6428	.47921
Child's Age	4.16	.967
Child's Gender	.5090	.49996
Child's Race/Ethnicity	.6095	.89774
Mother's Employment Status	.92	.949
Number of Parents in Household	1.69	.510

Source: National Household Education Survey, National Center for Education Statistics, 1996

Appendix F: 1999 National Household Education Survey
Means and Standard Deviations (N=5041)

Variable	Mean	Std. Deviation
Total Household Income	3.0989	2.04691
Mother's Education	2.3266	1.60967
Read to child last week	2.3239	.83392
Dichotomous Read to Child	.5315	.49905
Taught child letters, words, numbers	1.5762	.66450
Dichotomous Words, Letters, Numbers	.6748	.46848
Taught child songs/music in last week	1.1678	.82508
Dichotomous Songs and Music	.4383	.49623
Told child a story in last week	1.3064	.75386
Dichotomous Told Story	.4843	.49980
Arts and crafts with child in last week	1.1481	.77994
Dichotomous Arts and Crafts	.3891	.48759
Dichotomous Visit Library	.3923	.48831
SCALE1	7.9148	2.55081
Number Sibs in Household	1.3713	1.15403
Enrollment in School or Equivalent	.6769	.46769
Child's Age	4.18	.982
Child's Gender	.5126	.49989
Child's Race/Ethnicity	.6521	.96103
Mother's Employment Status	.94	.928
Number of Parents in the Household	1.68	.503

Source: National Household Education Survey, National Center for Education Statistics, 1999

Appendix G: 2001 National Household Education Survey
Means and Standard Deviations (N=3150)

Variable	Mean	Std. Deviation
Total Household Income	3.3910	2.07525
Mother's Education	2.2914	1.62889
Read to child last week	2.3907	.81065
Dichotomous Read to Child	.5748	.49443
Taught child letters, words, numbers	1.6837	.57883
Dichotomous Words, Letters, Numbers	.7431	.43699
Taught child songs/music in last week	1.3531	.77814
Dichotomous Songs and Music	.5416	.49833
Told child a story in last week	1.3786	.75181
Dichotomous Told Story	.5435	.49817
Arts and crafts with child in last week	1.2491	.77351
Dichotomous Arts and Crafts	.4547	.49801
Dichotomous Visit Library	.3615	.48050
SCALE1	8.4168	2.52491
Number Sibs in Household	1.3810	1.09557
Enrollment in School or Equivalent	.5345	.49887
Child's Age	3.67	.672
Child's Gender	.5027	.50006
Child's Race/Ethnicity	.6658	.95438
Mother's Employment Status	.92	.899
Number of Parents in Household	1.73	.483

Source: National Household Education Survey, National Center for Education Statistics, 2001

Appendix H: Interitem Correlations of the Components of *Parenting Cognitive Development*, 1991-2001 (N=26,850)

	<u>LWN</u>	<u>Music</u>	<u>Story</u>	<u>Art</u>	<u>Library</u>	<u>Scale</u>
Read	.247	.207	.364	.291	.232	.691
LWN		.241	.208	.222	.065	.544
Music			.268	.245	.070	.606
Story				.251	.127	.648
Art					.154	.628
Library						.380

P < .001 for all coefficients

Source: National Household Education Survey, National Center for Education Statistics, 1991
National Household Education Survey, National Center for Education Statistics, 1993
National Household Education Survey, National Center for Education Statistics, 1996
National Household Education Survey, National Center for Education Statistics, 1999
National Household Education Survey, National Center for Education Statistics, 2001

Appendix I: Interitem Correlations of the Components of *Parenting Cognitive Development*, 1991 (N=7655)

	<u>LWN</u>	<u>Music</u>	<u>Story</u>	<u>Art</u>	<u>Library</u>	<u>Scale</u>
Read	.253	.217	.361	.263	.242	.697
LWN		.238	.222	.212	.048	.552
Music			.269	.228	.089	.608
Story				.233	.120	.644
Art					.154	.605
Library						.379

P < .001 for all coefficients

Source: National Household Education Survey, National Center for Education Statistics, 1991

Appendix J: Interitem Correlations of the Components of *Parenting Cognitive Development*, 1993 (N=6583)

	<u>LWN</u>	<u>Music</u>	<u>Story</u>	<u>Art</u>	<u>Library</u>	<u>Scale</u>
Read	.209	.180	.330	.277	.218	.676
LWN		.204	.173	.196	.076	.524
Music			.248	.223	.089	.586
Story				.239	.115	.629
Art					.172	.620
Library						.392

P < .001 for all coefficients

Source: National Household Education Survey, National Center for Education Statistics, 1993

Appendix K: Interitem Correlations of the Components of *Parenting Cognitive Development*, 1996 (N=4421)

	<u>LWN</u>	<u>Music</u>	<u>Story</u>	<u>Art</u>	<u>Library</u>	<u>Scale</u>
Read	.264	.203	.370	.286	.237	.698
LWN		.246	.188	.218	.062	.533
Music			.233	.237	.037	.593
Story				.238	.133	.638
Art					.159	.628
Library						.383

P < .001 for all coefficients

Source: National Household Education Survey, National Center for Education Statistics, 1996

Appendix L: Interitem Correlations of the Components of *Parenting Cognitive Development*, 1999 (N=5041)

	<u>LWN</u>	<u>Music</u>	<u>Story</u>	<u>Art</u>	<u>Library</u>	<u>Scale</u>
Read	.227	.160	.359	.284	.235	.676
LWN		.219	.200	.198	.080	.540
Music			.237	.220	.058	.581
Story				.215	.140	.634
Art					.150	.613
Library						.395

P < .001 for all coefficients

Source: National Household Education Survey, National Center for Education Statistics, 1999

Appendix M: Interitem Correlations of the Components of *Parenting Cognitive Development*, 2001 (N=3150)

	<u>LWN</u>	<u>Music</u>	<u>Story</u>	<u>Art</u>	<u>Library</u>	<u>Scale</u>
Read	.245	.210	.350	.314	.242	.688
LWN		.237	.192	.246	.068	.526
Music			.279	.257	.094	.610
Story				.282	.145	.654
Art					.138	.653
Library						.398

P < .001 for all coefficients

Source: National Household Education Survey, National Center for Education Statistics, 2001

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