

Social Inequality

Kathryn M. Neckerman
Editor

Russell Sage Foundation
New York

2004

olzevine01.pdf (last accessed August 20, 2003).

as P., F. Thomas Juster, Joseph Lupton, and Frank Stafford. 1999. "Savings and Wealth: Then and per presented to the Conference on Health and Retirement. Amsterdam (October).

anita A., and Barbara Wolfe. 1977. "Do Schools Make a Difference?" *American Economic Review* 67(4):

ert H. 1997. "Factor Proportion and Relative Wages: The Supply-Side Determinants of Wage In-
' *Journal of Economic Perspectives* 11(1): 55–74.

tment of Commerce. U.S. Census Bureau. 2002a. "Historical Income Tables: Tables F-10, 10A, 10B,
: Families: Presence of Children Under Eighteen Years Old by Type of Family: White, Black, and
Families by Median and Mean Income: 1974 to 2001." Washington: U.S. Department of Commerce
er 30). Available at: www.census.gov/hhes/income/histinc/incfamdet.html.

2002b. "Historical Poverty Tables: Table 4: Poverty Status of Families, by Type of Family, Presence of
Children, Race, and Hispanic Origin: 1959 to 2001." Washington: U.S. Department of Commerce
er 30). Available at: www.census.gov/hhes/poverty/histpov/hstpov4.html.

2002c. "Historical Income Tables: Table F-4: Gini Ratios for Families, by Race and Hispanic Origin of
lder: 1947 to 2001." Washington: U.S. Department of Commerce (September 30). Available at:
www.census.gov/hhes/income/histinc/f04.html.

2002d. "Historical Income Tables: Table F-5: Race and Hispanic Origin of Householder: Families by
and Mean Income: 1947 to 2001." Washington: U.S. Department of Commerce (September 30).
at: www.census.gov/hhes/income/histinc/f05.html.

tment of Education. National Center for Education Statistics. 2001. "Table 4-1: Percentage Distribu-
ix- to Eighteen-Year-Olds According to Parents' Highest Education Level, by Child's Race-Ethnicity:
199." In *The Condition of Education 2001*. NCES 2001-072. Washington: U.S. Government Printing

tment of Health and Human Services. 1998. *Trends in the Well-being of America's Children and Youth*.
Washington: Government Printing Office.

2000. *Trends in the Well-being of America's Children and Youth: 2000*. Washington: Government Printing

eborah, and Barbara Wolfe. 2000. "Child Care Quality: Does It Matter and Does It Need to Be
:?" Special report 78. Madison: University of Wisconsin, Institute for Research on Poverty (Novem-

ard. 1998. "Recent Trends in the Size and Distribution of Household Wealth." *Journal of Economic*
es 12(3): 131–50.

2001. "The Rich Get Richer and Why the Poor Don't." *The American Prospect*, February 12: 15–17.

Inequality in Parental Investment in Child-Rearing: Expenditures, Time, and Health

Suzanne Bianchi, Philip N. Cohen, Sara Raley, and Kei Nomaguchi

What parents do for children "matters"—or so it is assumed. Much of the literature on social inequality at the individual or household level in the United States has focused on the role that families play in (re)producing inequality. For example, in the late 1960s and 1970s, the most studied topic in U.S. social stratification was intergenerational occupational mobility (Blau and Duncan 1967; Duncan, Featherman, and Duncan 1972; Jencks 1972). This tradition of research in sociology has had parallel streams within economics (see, for example, Robert Haveman and Barbara Wolfe's 1994 book *Succeeding Generations*). The continued focus on mechanisms through which parents monitor children's educational progress and risk-taking behavior and ensure their adult success is also manifest in the large and influential literature on the supposed harmful effects of growing up in a single-parent family. In the past decade many studies have tried to improve our understanding of what constitutes "successful parenting" and the costs that accrue when the conditions of parenting (for example, poverty or single-parenting or both) are less than optimal for producing salutary child outcomes; examples include Sara McLanahan and Gary Sandefur's widely cited 1994 book *Growing up in a Single-Parent Family: What Hurts? What Helps?* and Susan Mayer's 1997 book *What Money Can't Buy: Family Income and Children's Life Chances*.

Beginning with the early work of James Coleman, an extensive literature developed on education that asked whether schools make a difference. The backdrop for these studies, however, was always implicitly family investment: Does the quality of schools add to the likelihood of later life success, or is variation in student performance largely determined within the family (either through genetic endowment or differential family investments or both in combination)? Recently, the importance of peer influences as determinants of child outcomes have captured the attention of researchers. Yet again, the backdrop remains the relative influence of these factors compared with genetic endowment, family factors, and parenting behaviors that help ensure children's well-being.

The common theme in the large literature on the role of parents in determining children's success and well-being is that inequality in material and other investments that parents make in child-rearing may be one of the "keys" to predicting the inequality in the success of the next generation. Our subject in this chapter is the inequality in investment that occurs by socioeconomic level of the parents, focusing on the variation by college education.

Several changes in U.S. society since the 1970s lead us to speculate that differentials in

parents' ability to bestow resources on their children may be widening in recent years. First, as the wage gap between college-educated and less-educated workers widened in the 1980s and 1990s, income growth for children living in families with a college-educated parent outpaced that of children whose parent had less than a college degree. The family income distribution for children became more unequal after 1973. The Gini index for the income of children's families increased from 0.356 to 0.470 between 1973 and 1996 (Levy 1998, 164). Second, the growth in single-parent families shifted many children living only with their mother to the bottom of the income distribution (Cancian and Reed 1999; Chevan and Stokes 2000; Karoly and Burtless 1995; Levy 1998), and the prevalence of single-parenthood has been greater for less-than-college-educated men and women than for those with a college education. It is hypothesized that the decline in men's economic ability to support a family, combined with the availability of public assistance, has eroded the benefits of marriage among less-than-college-educated men and women (Becker 1981; Becker, Landes, and Michael 1977; Murray 1984; Oppenheimer 2000; Wilson 1987, 1996). Finally, there has been a dramatic increase in the employment of married mothers who responded to increased educational and labor force opportunities in recent decades, and that increase has been especially pronounced among more-educated women (Cohen and Bianchi 1999; Juhn, Murphy, and Pierce 1993).

More and more children reside in two-parent families where both parents are employed. Wives' employment reached 80 percent for married-couple families in the top income quintile in 1996, up from 32 percent in 1949 (Levy 1998, table 2.4). Although families at all income levels experienced an increase in wives' employment, the increase is greater for highly educated women than for less-educated women. Moreover, high rates of marital homogamy by educational attainment have also been increasing (see Kalmijn 1991; Mare 1995). Thus, well-educated, dual-earner, two-parent families now typify families at the top of the family income distribution. Children with college-educated parents seem to be in a better position economically compared with children whose parents are not college-educated. As college-educated parents' family income rose relative to that of less-educated parents, the better-educated parents may have also become better able to make large financial investments in their children.

In this chapter, we examine three major ways in which parents invest in their children. First, we focus on child-oriented expenditures. If, as Frank Levy (1998) argues, the family income of children's families by level of parents' education became more unequal, other things being equal, it would follow that expenditures targeted toward children should also have become more unequal. This implies that child-related purchases have increased or decreased at the same rate at which family income has increased or decreased. However, it may well be that parents protect monetary provisions for their children relative to other household expenditures. If this is the case, we would expect such expenditures to be inelastic relative to changes in income over time. By analyzing direct expenditures on children, we can ascertain whether increased income inequality has substantially increased the dispersion of material investments in children.

Second, parents engage in an array of activities with their children that are aimed at promoting the health and well-being of their offspring. Mothers in higher-income households used to stay at home, at least when their children were young, and early time diary studies suggested that highly educated mothers did more enriching activities with their children than less-educated mothers (Leibowitz 1974; Hill and Stafford 1985). The increase in employment among college-educated mothers and the increase in family income for those with a college education suggest two countervailing possibilities in trends in the inequality

in parental time investment in children. On the one hand, there may be growing similarity in maternal time investments in child-rearing across the income distribution as employment rates rise among highly educated, married mothers. Moreover, because of the increase in family income, highly educated parents may have encountered disincentives to use parental care for their children because the opportunity costs of time spent parenting, primarily mothers' time, have increased (Becker 1981). On the other hand, if parents wish to spend time with their children regardless of their level of education and family income, then it may be easier for well-educated parents than for less-educated parents to protect time for their children from the demands of paid work because they may have higher status, more flexible jobs, and a greater ability to purchase housekeeping services, prepared meals, and other services that reduce housework other than child care. How these countervailing tendencies have affected overall parental time with children is not immediately obvious, nor is it clear, without empirical investigation, whether these changes served to heighten socioeconomic differences in parental time with children, lessen them, or leave them unchanged.

Finally, from the point of view of children, having healthy parents is an important advantage. Although the link between parental health behaviors and child outcomes is not as direct as that between the time and money spent on children and child outcomes, staying healthy and maintaining a healthy lifestyle is an indirect but important "investment" that parents can make in their children to enhance their children's life chances (see Zill 1999, 2000). Parents' behaviors set examples for children. Healthier parents are in a better position to make the necessary time and money investments that child-rearing requires. Parents are known to be a self-selected group who, on average, have better health behaviors than those who remain childless (Umberson 1987). More-educated adults are also known to be healthier and to have better health behaviors than less-educated adults (Ross and Mirowsky 1999; Ross and Wu, 1995). However, we know less about variation in the health behaviors of parents than of adults in general; nor do we know whether the socioeconomic variation in the health of parents changed between the mid-1970s and the mid-1990s.

For each domain, expenditures, time, and health, we ask three questions. First, what is the differential *level* of investment between college-educated and less-than-college-educated parents? Second, what has been the *trend* in investment for parents at different points on the educational distribution? That is, are trends in investments in children salutary or not, and are trends similar or dissimilar for college-educated and less-than-college-educated parents? Finally, following from this assessment of trends, is there evidence of growing *bifurcation* in expenditures on children, parental time with children, and parental health behaviors between the college-educated and less-than-college-educated parents during the period of rising income inequality?

In the first section, we investigate levels and trends in child-oriented expenditures. Here we use data from the Consumer Expenditure Surveys (CEX) to examine expenditures on goods that directly benefit children. Our assessment covers change between the late 1980s and the late 1990s. In the second section, we focus on (co-residential) parents' time with children. We examine the series of time diary studies to investigate the college-noncollege differential in parental time in child-rearing. These data collections span the period 1965 to 2000, with collections at roughly ten-year intervals beginning in 1965. We are particularly interested in levels and trends in parental time in child-rearing for 1975 to 1995, the period of rising income inequality. In the third section, we track changes in parental health habits, using supplements to the National Health Interview Survey (NHIS) conducted in 1975–76, 1985, and 1995. We examine smoking, doctor visits, obesity, exercise participation, and self-reported illness and health status. In the last section, we summa-

rize our findings by returning to the questions we raised at the outset about levels, trends, and increasing differentials in child-oriented expenditure patterns, parental time, and health behaviors.

CHILD-ORIENTED EXPENDITURES

Researchers have long recognized that consumption may be a better indicator of economic well-being than current income (Lazear and Michael 1988; Mayer and Jencks 1989), for several reasons. Many people, especially the relatively rich, do not spend all the money they have because they choose to or are able to save money. There are also people who have temporarily low incomes but go on consuming by using past savings or the promise of future income (credit). Among the poor, on the other hand, many people consume goods and services purchased with money they do not literally have—or at least, do not report. For example, they may borrow money or goods informally or trade services (such as child care) with family members and friends. The net effect of these patterns is that at any one time there is less inequality in consumption than there is in income.

Previous studies have shown that income does not capture a lot of variability in consumption between the poor and the nonpoor (Federman et al. 1996; Tan 2000) and that differences in consumption across family types also vary in ways that income alone cannot predict (Lino 1994). For children, looking at consumption instead of income may be especially important. By focusing their spending on children's necessities, for example, poor parents may be able to protect their children from some of the effects of poverty. On the other hand, it may be that the multiple burdens of poverty compel the poor to cut corners in ways that make being poor even worse for their children. In this analysis, we ask whether increasing income inequality has affected families' spending on their children.

Consumer Expenditure Survey Data

To assess how spending for children has changed over time, we use data from the 1988 and 1998 Consumer Expenditure Survey (Branch 1994; U.S. Department of Labor 1998). The data represent a sample of the non-institutionalized urban and rural population. Sample sizes were approximately 5,000 households until 1998, and 7,500 thereafter. Expenditure data from each household are collected once per quarter for four quarters, and each interview covers the previous three months. For the analysis, we use all the expenditure data for each of the calendar years 1988 and 1998. Households contribute between one and twelve months of data to the sample. We annualize the data for each household by dividing the expenditures by the number of months each household reports for the calendar year and then multiplying by twelve. The demographic characteristics of the sample are collected at an initial interview, then updated at each additional interview. We use the information reported from the last interview for each household.

The unit of analysis in the Consumer Expenditure Survey is the consumer unit, which includes all members of the household when they are related by blood or legal arrangement. Other individuals and groups who share living expenses, whether alone or in households with others, are considered separate consumer units. Some households therefore include multiple consumer units. We include those consumer units in which there is at least one child age fifteen or younger. The resulting sample size is 3,755 in 1988 and 4,501 in 1998; the analyses are unweighted.

Complete information on spending targeted solely at children is impossible to obtain

from the CEX. Some goods—from housing to milk—are shared, and their consumption cannot be attributed to any one household member. Families with children may spend more money on some items, but unlike others who have used these data (Lazear and Michael 1988), we do not try to determine what portion of household expenses is intended for children. However, the CEX includes a number of detailed expenditure categories for goods and services that clearly are intended for consumption by children in the household. (We exclude items purchased as gifts for people outside the household.) We focus only on these spending categories, while acknowledging that they represent an unknown portion of all spending for children. An important caveat is that the CEX does not collect information on how *much* of any particular good or service is purchased, merely the dollar amount spent. For example, we cannot distinguish one hour of child care at eight dollars from two hours at four dollars each.

We use the following spending categories: infant furniture; infant equipment; school bus fees; playground equipment; school books and supplies; elementary and high school tuition; school meals; toys, games, hobbies, and tricycles; day care and related expenses; child care (in own or another home); and clothes and shoes for infants and children. We break these expenses into four groups to represent different types of investment in children. The first includes all the child-related spending categories, the broadest measure. The second includes all categories except day care and child care expenses. We consider a category excluding day care and child care because such spending may reflect less investment of parental time with children and therefore may or may not be an investment in children. That said, we also examine spending on child care, day care, and related expenses as our third group. Finally, the fourth group of expenditures includes only clothing and shoes for infants and children, representing the best indicator we have of child-specific spending on necessities. The dependent variables reflect annualized spending for each group of expenditures, with the 1988 figures adjusted to 1998 dollars.

We construct models for each expenditure group using consumer unit characteristics as predictors. Most variables measure characteristics of the reference person—identified by respondents as “the person or one of the persons who owns or rents the home.” These variables include: race (white, black, Latino, other), age, and education level (less than high school, high school only, B.A. or higher degree completed). Consumer unit variables include: total expenditure rank (consumer unit expenditure ranking in the total population, from zero to one), financial assets (the sum of checking and savings account balances, bonds and securities), family type (married couple, single father, single mother, other), number of earners in the household (none, one, two or more), number of children under age two, and number of children age two to fifteen. Descriptive statistics for the sample are presented in table 5A.1.

Results

Descriptive statistics for the expenditure analysis show a change from 1988 to 1998 in the pattern of spending on children, but not much change in the overall level (table 5.1). The only substantial increase was in spending on day care and related expenses, which increased 64 percent from \$590 per child in 1988 to \$968 per child in 1998. Non-day-care-related spending dropped a corresponding amount, so that the total spending stayed almost the same (increasing from \$1,933 to \$2,009 in total spending per child).

Using the per-child spending totals for each consumer unit, and weighting each consumer unit by the number of children present, we compute child-level Gini indices for each

TABLE 5.1 *Descriptive Statistics, Expenditure Analysis: Households with Children, 1988 to 1998*

	Dollars (Standard Deviation)		Logged	
	1988	1998	1988	1998
Total all child categories	1,933 (2,676)	2,009 (3,813)	6.67 (1.89)	6.54 (2.02)
Day care and related expenses	590 (1,556)	968 (2,270)	2.26 (3.24)	4.04 (3.21)
Total less day care expenses	1,344 (2,032)	1,041 (2,923)	6.35 (1.84)	5.74 (2.20)
Clothing and shoes only	611 (807)	594 (869)	5.33 (2.18)	5.15 (2.33)
Number of cases	3,755	4,501		

Source: Authors' configuration.

Note: Spending is annual consumer unit spending per child under age fifteen, in 1998 dollars.

group of spending categories. The results, presented in table 5.2, show increases in inequality among children, with the exception of day care and related expenses. This group presumably shows a decrease in inequality principally because there are fewer children with no day-care-related spending. The overall increase in inequality in total expenditures, from .570 to .614, is greater than that shown for clothing and shoes. This expenditure category showed the least mean change and the smallest increase in the standard deviation (consistent with our interpretation of this as an essentials group).

Tables 5.3 and 5.4 show the results from regressions computed separately for each spending group. We use OLS regression for all models except day care and related spending. For this outcome, we use Tobit regression because there are many cases with zero spending (table 5.4). In each analysis the samples from 1988 and 1998 are pooled, with a time interaction for each variable. For presentation, we show coefficients for each variable for each period, and the changes from 1988 to 1998, in separate columns.

We concentrate on the results related to increases in economic inequality: education, total expenditures, and financial assets. Coefficients for each of these variables at both time periods show significant inequality in spending on children. That is, children in households with more educated parents, greater total spending, and greater financial assets consume

TABLE 5.2 *Gini Indices: Spending on Children (per Child), 1988 to 1998*

	1988	1998	Change
Total all child categories	.570	.614	.043
Total less day care expenses	.552	.613	.061
Day care and related expenses	.863	.793	-.070
Clothing and shoes only	.556	.576	.020

Source: Authors' configuration.

TABLE 5.3 *OLS Coefficients: Two Categories of Spending per Child (ln), 1988 to 1998*

	Total All Child Categories (OLS) ^a			Total Less Day-Care Expenses (OLS) ^b		
	1988	1998	Change	1988	1998	Change
Intercept	5.436***	5.355***	-.082	4.890***	3.590***	-1.300***
Expenditure rank	2.654***	2.897***	.243	2.415***	2.483***	.068
Financial assets (ln)	.017 ⁺	.014 ⁺	-.003	.014*	.028**	.014
High school only	.394***	.187*	-.207 ⁺	.346***	.086	-.260*
College degree or more	.465***	.350***	-.116	.404***	.164	-.240
Black	-.259**	-.065	.194	-.319**	.070	.389**
Latino	-.159	-.134	.025	-.156	.098	.253 ⁺
Other race/ethnicity	-.409**	-.315**	.094	-.378*	-.181	.196
Age of reference person	-.015***	-.010***	.005	-.002	.013***	.015**
Single father	.394 ⁺	-.402*	-.795**	.206	-.464*	-.670*
Single mother	.461***	.377***	-.084	.287**	.329***	.041
Not own children	-.289**	-.208*	.081	-.396***	-.384***	.012
No earners	-.383**	-.551***	-.168	-.211	-.452***	-.241
Two or more earners	.275***	.069	-.206*	.105	.087	-.019
Children under age two	-.113	-.040	.073	-.095	.402***	.496***
Children age two to fifteen	-.144***	-.191***	-.047	-.111***	-.060 ⁺	.050

Source: Authors' configuration.

Notes: Excluded categories are white; less than high school; married couple with own children; one earner in household. N = 8,276.

^aAdjusted R-squared = .185.

^bAdjusted R-squared = .151.

⁺ p < .10; * p < .05; ** p < .01; *** p < .001

more child-related goods and services than do other children, holding constant other characteristics of the household.

However, the change over time in these effects is either negative or insignificant, a finding that is not consistent with the increasing-inequality hypothesis. The coefficients for expenditure rank show the difference between the lowest- and highest-spending consumer units. In each case the effect of this variable does not change significantly from 1988 to 1998. The education effects show positive effects on spending associated with higher levels of education, but these effects also either decrease or do not significantly change. Finally, the financial-assets effect is positive and significant in each model except day care in 1998, for which it is no longer significant.

To see whether the growing use of day care and related services is taking a toll on spending on other necessities for children, we estimate a separate model (not shown) of spending on clothing and shoes that includes spending on day care as a predictor. We find that, in both 1988 and 1998, households that spent more on day care actually spent more—not less—on clothing and shoes for their children, holding constant other variables in the

TABLE 5.4 OLS/Tobit Coefficients: Two Categories of Spending per Child (ln), 1988 to 1998

	Clothing and Shoes Only (OLS) ^a			Day Care and Related Expenses (Tobit) ^b		
	1988	1998	Change	1988	1998	Change
Intercept	3.634***	3.602***	-.031	.717	2.930***	2.214**
Expenditure rank	2.357***	2.274***	-.083	6.005***	5.226***	-.779
Financial assets (ln)	.034**	.033**	-.001	.124***	.033	-.091*
High school only	.213*	-.043	-.256+	.921**	.700**	-.221
College degree or more	.221+	-.020	-.241	1.897***	1.239***	-.658
Black	-.049	.197*	.246+	-.559	-.570*	-.011
Latino	-.136	.268**	.404*	-.623	-1.075***	-.452
Other race/ethnicity	-.223	-.177	.046	-1.201*	-1.251**	-.050
Age of reference person	.000	.003	.003	-.216***	-.095***	.120***
Single father	.308	-.514*	-.822*	1.914*	-1.004+	-2.918**
Single mother	.420***	.328**	-.092	1.930***	.317	-1.613**
Not own children	-.264*	-.376***	-.112	.621	.200	-.421
No earners	.007	-.385*	-.392+	-3.429***	-1.015*	2.414**
Two or more earners	.085	-.025	-.110	1.245***	-.267	-1.512***
Children under age two	.318***	.631***	.314**	.496*	-.060	-.556+
Children age two to fifteen	-.073*	-.067+	.006	.289**	.120	-.169

Source: Authors' configuration.

Notes: Excluded categories are white; less than high school; married couple with own children; one earner in household. N = 8,276.

^aAdjusted R-squared = .085.

^bPseudo R-squared = .057.

+ p < .10; * p < .05; ** p < .01; *** p < .001

model. Therefore, it does not appear that day care is substituting for other necessities in households with children.

PARENTAL INVESTMENT OF TIME IN CHILD-REARING

A number of studies during the past three decades have directly assessed parental time spent with children, though usually for only one point in time. Studies using time diary data from the mid-1970s to the early 1980s focus on maternal time with children, particularly variation by maternal educational attainment. More highly educated mothers are found to spend more time in direct child care (Hill and Stafford 1985; Zick and Bryant 1996), and mothers' time with children declines less steeply with the age of the child among better-educated mothers (Hill and Stafford 1985). Maternal education is also related to the type of child care activities mothers engage in with their children: more highly educated mothers spend more time reading to their children and less time watching television with them (Timmer, Eccles, and O'Brien 1985).

In a recent study using two points in time, 1981 and 1997, John Sandberg and Sandra Hofferth (2001) find that these differences not only persisted through 1997 but may have grown wider. In 1981 children of mothers with some college spent more time in art and reading and less time watching TV than children of mothers with no college. Although the

same was true in 1997, further differences had emerged. In 1997 children of mothers with some college also spent more time in market work, sports, outdoor activities, hobbies, household conversations, studying, other passive leisure, and day care relative to 1981. These differences probably reflect both changed values and the ability of more highly educated parents to afford such activities for their children. However, it is not clear to what extent they reflect increasing inequality in maternal time between college-educated mothers and mothers with no college education because, with the exception of television viewing, the overall differences in activities between children of college and non-college-educated mothers were small in both 1981 and 1997 (Sandberg and Hofferth 2001).

The focus of recent research on parental time has shifted to assessments of father's education and time with children. Two studies report that education has no effect on physical care of preschool-age children (Aldous, Mulligan, and Bjarnason 1998; Marsiglio 1991) but that more highly educated fathers spend more time playing with, reading to, or going on outings with preschool-age children (Cooney et al. 1993). Studies that examine the effect of paternal education on time with school-age children have found either no relationship (Barnett and Baruch 1987; Ishii-Kuntz and Coltrane 1992; Pleck 1981; Zick and Bryant 1996) or a positive relationship (Aldous, Mulligan, and Bjarnason 1998; Fisher, McCulloch, and Gershuny 1999; Haddad 1994; Marsiglio 1991; Yeung et al. 2001).

For example, married fathers with some postsecondary education spend more time on weekdays with children in achievement-oriented activities and more in social-related activities than fathers with no postsecondary education (Yeung et al. 2001). More specifically, fathers with higher levels of education are more likely to help their children with homework and reading assignments as well as have one-on-one conversations with them (Marsiglio 1991). Fathers with higher levels of education have also been observed stimulating, responding to, and providing care to their nine-month-old infants more frequently than less-educated fathers (Volling and Belsky 1991).

Further, paternal time with children does not appear to substitute for maternal time with children: the more time mothers invest in child care, the more time fathers also spend with their children (Aldous, Mulligan, and Bjarnason 1998). When mothers hold a college degree, children spend about four and a half hours more per week with their fathers than children whose mothers do not have a degree (Sandberg and Hofferth 2001). Children in all family types spend more time with either parent when their mother holds a college degree (Sandberg and Hofferth 2001).

Time Diary Data

Time with children often occurs in disjointed segments throughout the day, and it is exceedingly difficult to accurately recall and add up such time in response to a stylized question such as: "How much time do you spend with your child on an average day?" Therefore, the best data for assessing parental time with children in the United States have been collected in periodic time diary studies of representative samples of adults. The time diary mode of data collection "walks" a respondent through his or her day, most often the day previous to the interview, and asks the respondent to recall activities in a sequential order as they occurred during the day.

One of the advantages of the diary mode of data collection is that respondents are forced to adhere to the twenty-four-hour constraint. Especially for unpaid work and family caregiving activities like housework and child care, estimates derived from answers to survey questions often result in hours estimates that exceed the daily twenty-four-hour constraint.

TABLE 5.5 Methodological Features of U.S. National Time Diary Studies

Location conducted	1965				1975				1985				1995				1998				2000			
	University of Michigan				University of Michigan				University of Maryland				University of Maryland				University of Maryland				University of Maryland			
Funder	National Science Foundation				National Science Foundation				National Science Foundation; AT&T				Electric Power Research Institute				National Science Foundation				Alfred P. Sloan Foundation			
Sample	Total = 1,244 Parents = 742				Total = 2,406 Spouses = 887 Parents = 1,087				Total = 5,358 Parents = 1,612				Total = 1,200 Parents = 493				Total = 1,151 Parents = 496				Total = 1,200 Parents = 1,200			
Age range	Eighteen to sixty-five				Eighteen and older				Twelve and older				Twelve and older				Eighteen and older				Eighteen and older			
Months	October to November				October to December				January to December				January to December				March to December				June to May (one-day) August to June (weekly)			
Mode/response rate	Personal (72%)				Personal (72%)				Mailback (51%) Telephone (67%) Personal (60%)				Telephone (65%)				Telephone (56%)				Telephone (64%) Mailback (23 to 30%)			
Diary type	Tomorrow (1,244) Yesterday (130)				Yesterday (2,406)				Tomorrow (3,890) Yesterday (1,468)				Yesterday (1,200)				Yesterday				Yesterday Last week			
Sample restrictions	Residents of labor force families in nonfarm, urban locations				Excludes households on military reservations				Households in the contiguous United States (plus D.C.)				Households in the contiguous United States				Households in the contiguous United States				Parents living with children under age eighteen in household in contiguous United States			
Identification of parents	"Do you have any children eighteen years of age or younger living in this household?"				Constructed from household roster: the number of children age seventeen or younger in household				Variable indicating children under age eighteen in household				Variable indicating children under age eighteen in household				Flag created by Liana Sayer based on marital status and number of adults in home				Interviewer asks if there are children under age eighteen in the household and asks to speak with parent			
Miscellaneous					Spouse interviewed as well as respondent																Weekly diaries went to select parents ^a			

Source: Authors' configuration.

^aParents who worked at least ten hours a week for pay and at least one of the parents had some college education.

Recent comparisons of housework hours elicited in the diary format with estimates from survey questions suggest that the estimates from survey questions tend to be 50 percent higher, though the relationship of covariates to the estimates under either format tend to be similar (Bianchi et al. 2000).

Table 5.5 provides summary information for each of the time diary data collections in the United States, collected at roughly ten-year intervals beginning in 1965. The National Science Foundation funded data collections in 1965 and 1975, conducted at the University of Michigan, and in 1985 and 1998 to 1999 at the University of Maryland. From all sampled cross-sections of the U.S. adult population, we identified parents as those who were living with children under age eighteen. The 1975 study also included diaries with spouses of married respondents. For comparability with other years, we exclude the spousal diaries from our analysis. We include two other national surveys, both collected at the University of Maryland: a 1995 survey funded by the Electric Power Research Institute (EPRI), and a 2000 survey, funded by the Alfred P. Sloan Foundation's Working Families Program, that used a national probability sample of 1,200 parents living with their children under age eighteen.

A standard methodology for administering the time diary and a comparable set of coding conventions has been used across this time period in the United States. All data collections include reports of "primary activities" during a twenty-four-hour period—that is, the sequential reporting that a respondent gave to the question, "What were you doing?" These activities might be regarded as the most salient activity for a respondent and are collected so as to fix beginning and ending times for each activity. We have primary activity data for each of our time points, and the child care estimates we report include time coded into the following nine activity categories: baby care, child care, helping and/or teaching, talking and/or reading, indoor playing, outdoor playing, medical care for child, other child care, and travel for child care.

In most but not all of the data collections, respondents were also asked to report "what else they were doing," resulting in estimates of secondary activity. Researchers have suggested that child care activities in particular may be substantially underestimated because child care is often done in conjunction with other activities and may go unreported when only primary activity is ascertained. In addition, several of the collections also collect "with whom" data. That is, respondents were asked to report "who was with you" during each activity, providing yet another measure of time "with children."

For the trend analysis in this chapter, we focus on primary child care time of mothers and fathers on the diary day. This results in low estimates of the proportion of parents who engaged in child care, particularly those who had older children and were less likely to be doing direct child care activities such as changing diapers and reading to their children. These differences are illustrated with the 2000 data in table 5.6. For example, whereas the estimate of primary time parents spent in child care activities is 87 minutes a day on average, this estimate rises by almost 50 percent when secondary child care time is added. Time spent "with children" is three times as great as the combination of primary and secondary child care time. The distribution for fathers is affected by the choice as well: when the focus is on primary child care time, the ratio of fathers at the seventy-fifth to the twenty-fifth percentile cannot be calculated because more than one-quarter of fathers of children under age eighteen reported no direct time in the activities coded as child care, whereas fathers at the twenty-fifth percentile reported spending an average of 120 minutes, or two hours, a day "with" their children.

Data limitations compel us to concentrate on primary activity time in child care rather

TABLE 5.6 *Child Care Time (Minutes per Day) in the United States, 2000*

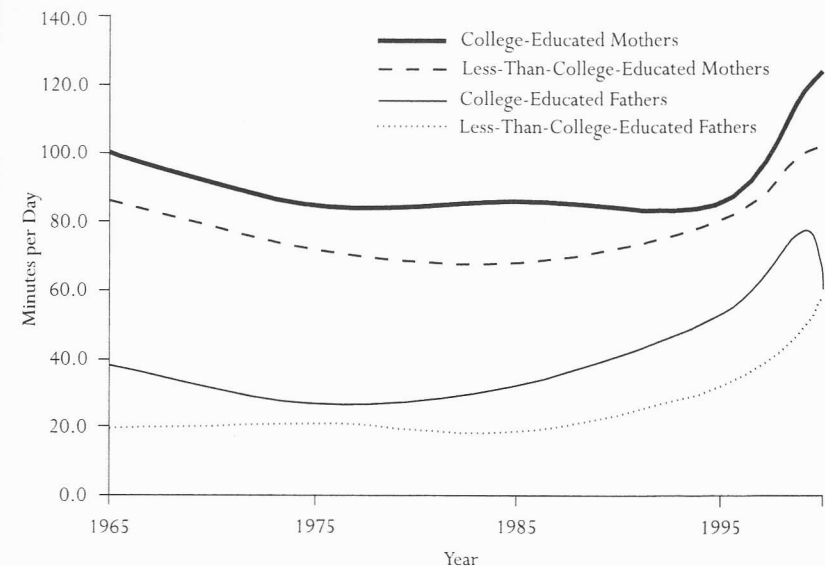
	Primary	Primary or Secondary	Total Time with Children
Total parents			
Mean	87	123	372
(Standard deviation)	115	155	261
Seventy-fifth percentile	127	185	540
Median	45	67	325
Twenty-fifth percentile	0	0	160
Ratio of Seventy-fifth to Twenty-fifth	—	—	3.4
Total mothers			
Mean	108	159	437
(Standard deviation)	112	161	257
Seventy-fifth percentile	165	235	655
Median	70	110	402
Twenty-fifth percentile	11	30	225
Ratio of Seventy-fifth to Twenty-fifth	15.0	7.8	2.9
Total fathers			
Mean	62	80	293
(Standard deviation)	113	130	241
Seventy-fifth percentile	85	115	450
Median	15	30	255
Twenty-fifth percentile	0	0	120
Ratio of Seventy-fifth to Twenty-fifth	—	—	3.8

Source: Authors' configuration.

than a more expansive definition that includes all time with children. The diary data deposited at the Inter-University Consortium for Political and Social Research (ICPSR) for 1965 include only summed minutes of primary and secondary time per day in each coded activity, and we cannot determine what portion of secondary child care time overlaps with primary child care time. To avoid double-counting child care time and violating the twenty-four-hour constraint, we focus on primary time. Similarly, the diary data deposited for 1985 include only primary time. Finally, secondary activities were not ascertained in the 1995 EPRI collection.

A final caveat concerns the 2000 data. All time diary data collections include the diary portion of the questionnaire within a survey that asks demographic information and includes questions on activities that vary from survey to survey. All surveys except the 2000 collection were done with cross-sections of all adults, parents as well as nonparents, and hence the questions surrounding the diary are not particularly child-focused. This is not true of the 2000 collection, which was funded by the Sloan Foundation to collect diary and survey estimates on parents and about parenting. The questions surrounding the 2000 diary collection are hence much more focused on parental activities and parents' feelings about their children.

Figure 5.1 graphs the trend in average (mean) time caring for children for mothers and fathers. Solid lines show the trends for college-educated parents, dotted lines for less-than-college-educated parents. Estimates are reported in minutes per day. The trend in figure 5.1, apparent in all of the lines, is curvilinear: reported child care time dropped from 1965 to 1975 and rose thereafter. The first data point, 1965, was near the end of the postwar

FIGURE 5.1 *Maternal and Paternal Primary Time (Minutes per Day) Caring for Children, by Educational Status, 1965 to 2000*

Source: Authors' configuration.

baby boom, when households with children still included relatively large numbers of (young) children. At the next data point, 1975, the baby bust was in full swing, with declining numbers of (young) children per household. If we also take 1975 as a rough marker of the beginning of a period of dramatically rising income inequality, Figure 5.1 suggests that an *increase* in the mean parental child care time coincided with rising inequality. At each point the line for college-educated parents is higher than for less-than-college-educated parents, and not surprisingly, lines for mothers are much higher than for fathers.

Table 5.7 shows the mean child care times by educational attainment. We separate child care time into two components: one we label "engagement," which includes activities such as reading, talking, and playing with children and helping children with homework, and the other component, the bulk of child care time, we label "basic care" time. Shown in the table is the ratio of time for college-educated relative to less-than-college-educated mothers and fathers. For mothers, the ratio at all time points is in the range of 1.1 to 1.3. The ratio for fathers is more variable: in 1965 college-educated fathers have means twice as high as those of less-educated fathers, and this ratio declines and fluctuates between 1.0 and 1.7 at each of the data points between 1975 and 1998. In the 2000 data collection, estimates for college-educated and less-than-college-educated fathers are virtually the same. However, as noted earlier, we suspect that this collection may not be strictly comparable to earlier cross-sections because questions surrounding the diary are more child-focused.

Table 5.8 reports descriptive statistics on the mean and standard deviation of child care

TABLE 5.7 *Differentials in Mean Total Primary Child-Care Time, Engagement Time, and Basic Care Time (Minutes per Day) Between College-Educated and Less-Educated Mothers and Fathers in the United States, 1965 to 2000*

	1965	1975	1985	1995	1998	2000
Mothers						
Primary child care	87.2	74.1	71.8	82.2	104.4	108.0
College-educated	99.7	85.3	86.8	86.6	118.4	125.3
Less than college	86.2	72.4	68.7	81.3	100.8	102.9
Ratio college/less-educated	1.2	1.2	1.3	1.1	1.2	1.2
Engagement time	12.5	16.4	15.3	22.1	27.9	26.9
College-educated	26.5	20.1	16.7	33.8	31.3	32.5
Less than college	11.4	15.8	15.0	19.6	26.9	25.2
Ratio college/less-educated	2.3	1.3	1.1	1.7	1.2	1.3
Basic care time	74.1	57.7	56.5	60.2	76.6	81.1
College-educated	73.2	65.2	70.1	53.1	87.1	92.8
Less than college	74.8	56.6	53.7	61.7	73.8	77.6
Ratio college/less-educated	1.0	1.2	1.3	0.9	1.2	1.2
Fathers						
Primary child care	21.2	22.2	22.5	37.9	57.3	61.7
College-educated	37.8	27.2	32.8	53.3	78.2	61.8
Less than college	18.7	20.8	18.9	33.0	49.8	61.4
Ratio college/less-educated	2.0	1.3	1.7	1.6	1.6	1.0
Engagement time ^a	9.7	5.2	7.9	13.7	21.5	19.1
College-educated	11.0	10.6	11.0	13.4	22.7	20.8
Less than college	9.5	3.8	6.8	13.8	21.1	18.5
Ratio college/less-educated	1.2	2.8	1.6	1.0	1.1	1.1
Basic care time ^b	11.5	16.9	14.6	24.2	35.8	42.7
College-educated	26.7	16.5	21.8	39.9	55.5	40.7
Less than college	9.2	17.1	12.1	19.2	28.7	43.3
Ratio college/less-educated	2.9	1.0	1.8	2.1	1.9	0.9
Sample size						
Mothers	417	369	913	312	273	728
College-educated	41	39	154	71	84	243
Less than college	376	330	759	241	189	485
Fathers	343	251	699	181	163	472
College-educated	67	57	180	62	64	163
Less than college	276	194	519	119	99	309

Source: Authors' configuration.

^aEngagement time includes time spent helping and/or teaching child, talking and/or reading to child, and indoor and outdoor play with child.

^bBasic care time includes caring for infants, arranging social and extracurricular activities of child, medical care of child, and traveling related to child-care activities.

time for parents, mothers, and fathers, and also the median, seventy-fifth, and twenty-fifth percentiles of the distribution of child care time. As the mean rises between 1975 and 2000, the standard deviation of the distribution rises, as do the reported amounts of time at the seventy-fifth percentile of the distribution. However, what is most striking in the table is the relatively high proportions of fathers who, on a given day, reported no time in direct child

TABLE 5.8 *Trends in the Distribution of the Primary Child-Care Time of Parents (Minutes per Day) in the United States, 1965 to 2000*

	1965	1975	1985	1995	1998	2000
Total parents						
Mean	57	51	48	63	85	87
(Standard deviation)	78	76	85	96	106	115
Seventy-fifth percentile	82	78	60	100	140	127
Median	28	15	0	5	50	45
Twenty-fifth percentile	0	0	0	0	0	0
Reporting any primary child-care time in diary day	61.5%	59.5%	49.2%	50.8%	62.9%	66.5%
Total mothers						
Mean	87	74	72	82	104	108
(Standard deviation)	89	82	97	102	110	112
Seventy-fifth percentile	140	105	102	140	180	165
Median	60	52	30	40	70	70
Twenty-fifth percentile	15	0	0	0	0	11
Reporting any primary child-care time in diary day	90.1%	76.0%	63.9%	57.6%	70.6%	76.6%
Total fathers						
Mean	21	22	23	38	57	62
(Standard deviation)	42	53	56	77	94	113
Seventy-fifth percentile	30	25	20	55	90	85
Median	0	0	0	0	15	15
Twenty-fifth percentile	0	0	0	0	0	0
Reporting any primary child-care time in diary day	38.7%	38.2%	33.4%	41.7%	52.1%	54.2%
Sample size						
Total	760	620	1,612	493	436	1,200
Mothers	417	369	913	312	273	728
Fathers	343	251	699	181	163	472

Source: Authors' configuration.

care between 1965 and 1995—hence the medians and twenty-fifth percentiles are zero for the distribution of fathers' time.

The first column of table 5.9 shows the bivariate estimates for time in child care among the college-educated as compared with those with less education: college-educated mothers spent about twenty-six minutes more per day in child care than did less-educated mothers, and college-educated fathers spent over forty minutes more per day in primary child care than less-than-college-educated fathers. The linear relationship between year and time expenditures is shown in model 2, with both mothers and fathers spending significantly more time in child care in 2000 relative to the 1970s.

In models 3 and 4, which include the linear trend (column 3) and show estimates with controls for age, marital status, children, and employment of the parent (column 4), coefficients for college education remain statistically significant. Models 5 and 6 test whether the primary child care time of parents has become increasingly differentiated for college-educated as compared with less-than-college-educated parents. None of the interaction terms for year and education are statistically significant in the models for either the mothers

TABLE 5.9 *Tobit Models Predicting Primary Child-Care Time (Minutes per Day) of Mothers and Fathers, 1965 to 2000 (1975 as Omitted Category)*

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Mothers						
College-educated	26.1***	—	24.1***	29.3***	15.9	41.1*
yr65	—	17.8	19.2*	4.4	18.7*	2.8
yr85	—	-15.1 ⁺	-16.1*	20.3**	-18.4*	20.6**
yr95	—	-10.0	-11.1	14.2	-10.6	16.5
yr98	—	27.6	25.7 ⁺	43.2***	25.6 ⁺	44.1***
yr00	—	36.7***	34.3***	50.3***	32.6**	46.5***
yr65 × college	—	—	—	—	-0.5	-17.2
yr85 × college	—	—	—	—	14.9	-29.0
yr95 × college	—	—	—	—	-0.6	-19.8
yr98 × college	—	—	—	—	3.9	0.8
yr00 × college	—	—	—	—	10.7	-17.5
Controls						
Age	—	—	—	-1.13**	—	-1.15**
Married	—	—	—	17.7*	—	17.8*
Children under age six	—	—	—	95.2***	—	95.5***
Number of children	—	—	—	12.1***	—	12.1***
Employed	—	—	—	-25.3***	—	-25.1***
Weekly hours employed	—	—	—	-0.6***	—	-0.6***
Fathers						
College-educated	43.4***	—	40.8***	38.7***	70.7**	44.7 ⁺
yr65	—	-0.4	2.3	0.5	-5.6	-4.6
yr85	—	-8.9	-11.8	9.2	-18.9	5.9
yr95	—	27.3 ⁺	25.3	32.1*	16.8	28.4
yr98	—	66.3***	63.1***	62.1***	50.0*	55.6**
yr00	—	74.2***	72.3***	64.6***	76.1***	68.4***
yr65 × college	—	—	—	—	-5.7	7.4
yr85 × college	—	—	—	—	-19.7	-10.7
yr95 × college	—	—	—	—	-13.8	-8.5
yr98 × college	—	—	—	—	-60.2	-36.6
yr00 × college	—	—	—	—	-48.2	-22.5
Controls						
Age	—	—	—	1.4**	—	1.5**
Married	—	—	—	19.5	—	19.5
Children under age six	—	—	—	100.2***	—	99.7***
Number of children	—	—	—	-0.5	—	-0.8
Employed	—	—	—	33.9*	—	34.0*
Weekly hours employed	—	—	—	-1.1***	—	-1.1***

Source: Authors' configuration.

Notes: Year is coded as yr65 = 1, yr75 = 1, yr85 = 1, yr95 = 1, yr98 = 1, yr100 = 1, in this concatenated data. Age of youngest child is coded "1" if the parent has a child under age six in 1965, 1998, and 2000 and coded "1" if the parent has a child under age five in 1985 and 1995. There is no variable for work hours that is consistent across all years, so we sum activity measures of work time based on total work time, not including commuting to work.

p < .10; * p < .05; ** p < .01; *** p < .001

or the fathers. There is no suggestion that the college-noncollege differential in parental investment of time in children has increased or diminished during the period of increased income inequality.

PARENTAL HEALTH BEHAVIORS

Studies suggest that parental health and health-related behaviors have important influences on children's health, illness, and health behaviors. For example, children with mothers who are healthier and get adequate prenatal checkups are less likely to be born with low birthweight or to die shortly after birth than children with less healthy mothers (Cramer 1987; Hummer 1993). Lower birthweight and illness in childhood have significant long-term influences on health in later years (Barker and Osmond 1986; Wadsworth 1986). Further, children learn healthy lifestyles from their families. Some studies have found a direct association between adolescent children's health-related behavior, such as smoking, drinking, exercise, and eating and sleeping habits, and their parents' health lifestyles (Wickrama et al. 1999).

There is a well-established health gradient by socioeconomic status (Kitagawa and Hauser 1973; Preston and Taubman 1994; Williams 1990). Socioeconomic status can be measured in several ways, including income, occupational status, and education, but many studies have suggested that education is the best indicator, showing the most robust association with mortality and health among U.S. adults (Ross and Mirowsky 1999; Williams 1990). Catherine Ross and Chia-ling Wu (1995) argue that adults with more education are healthier than those with less education because they not only have better jobs and higher income but are also more likely to avoid health-risk behaviors and to engage in more health-enhancing behavior. Those with more education smoke less, exercise more, get regular health checkups, and drink more moderately compared with those with less education.

Determining causality between socioeconomic status and health status is complex. Are individuals less well off because they are in poor health and have poor health behaviors, or does poverty and low income lead to inadequate medical care and less healthy conditions at home and at work? Do poor health habits decrease individuals' ability to pursue educational and occupational achievement, or do individuals with a higher socioeconomic status have better economic resources and social support to achieve healthier lifestyles? Rather than focusing on causality, we are more curious about the extent to which there is a gap in health and health-related behaviors between college-educated and less-educated parents and whether that gap has been growing during a time of growing income inequality.

National Health Interview Survey Data

Data for the analysis of health and health-related behavior are drawn from supplements of the National Health Interview Survey. The NHIS is an ongoing national survey of the civilian non-institutionalized population of the United States annually conducted by the National Center for Health Statistics (NCHS). Information about health-related behavior is obtained in *Current Health Topics*, special supplements in which different topics are included each year. We use four supplements: the 1975 Physical Fitness Supplement (1975 PFS—for exercise participation only), the 1976 Health Habits Supplement (1976 HHS—for other health indicators we examine in this section), the 1985 Health Promotion and Disease Prevention Supplement (1985 HPDP), and the 1995 Year 2000 Objectives Supplement (1995 Year 2000 Objectives). From each supplement, we selected adults who lived with their children

under age eighteen. The sample sizes for these parents are 6,302 in 1975, 12,320 in 1976, 12,248 in 1985, and 6,242 in 1995.¹

We examine six indicators of health and health-related behavior: current cigarette smokers, doctor visits, obesity, exercise participation, subjective health, and work loss due to illness or injury. Each of these health indicators is measured as follows:

- Current cigarette smokers:

"Do you now smoke cigarettes every day, some days, or not at all?"

- Doctor visits:

"About how long has it been since you last saw or talked to a medical doctor or assistant?"

- Obesity:

Respondents' body mass index (BMI) was calculated to determine presence of obesity

- Exercise participation:

"In the past two weeks, have you done any of the following exercises, sports, or physically active hobbies?" (1985 HPDP and 1995 Year 2000 Objectives)

"Do you do any of the following exercises on a regular basis?" (1975 PHS)

Subjective health:

"Would you say your health in general is excellent, good, fair, or poor?" (1976 HHS)

"Would you say your health in general is excellent, very good, good, fair, or poor?" (1985 HPDP and 1995 Year 2000 Objectives)

Work loss due to illness or injury:

"During the past two weeks, how many days did you miss more than half of the day from your job or business because of illness or injury?"

Current cigarette smokers include those who smoked cigarettes every day or some days of the week. In measuring the answers to the question about *doctor visits*, we consider no contacts with medical professionals for over two years to be a sign of inadequate health care (see Zill 1999). *Obesity* is defined as a body mass index of 30.0 or more, with BMI calculated using information on weight and height collected in the survey ($BMI = [\text{weight in pounds divided by height in inches divided by height in inches}] \text{ multiplied by } 703$; National Heart, Lung, and Blood Institute 1998). *Exercise participation* is measured by whether respondents participated in one or more of five listed exercise activities on a regular basis (for the 1975 supplement) or in the previous two weeks (in the 1985 and 1995 supplements): walking for exercise, lifting weights, jogging or running, riding a bicycle, and swimming. The questions on exercise participation in the 1975 survey are not strictly comparable to those in the 1985 and 1995 surveys. Thus, we are cautious about our findings on trends in exercise participation rates, although the issue of comparability is less critical for within-year comparisons of college-educated parents and less-than-college-educated parents. We consider answers of "fair" or "poor" in response to the question on *subjective health* to be indicators of negative states of health. *Work loss due to illness or injury* during the previous two weeks is the final health indicator we measured.

Results

Table 5.10 presents the percentage of mothers by educational attainment who were current cigarette smokers, who had no doctor visits during the preceding two years, who were obese, who participated in exercise activities, who were in fair or poor (subjective) health, and who lost work time during the past two weeks owing to illness or injury. College-educated mothers show higher levels of health and health-related behavior than mothers with less than a college education on all indicators in all years except for work loss in 1976 and 1985. For instance, in 1995 college-educated mothers, compared with their less-educated counterparts, were only 40 percent as likely to be smokers; only 56 percent as likely to have had no contact with a doctor for over two years; only 64 percent as likely to be obese; 26 percent *more* likely to exercise; only 32 percent as likely to report that they were in fair or poor health; and only 58 percent as likely to have missed a day of work during the previous two weeks owing to illness or injury.

Trends in health and health-related behaviors among mothers suggest both rises and declines in good health and health-related behaviors, depending on the health indicators. Smoking declined between 1976 and 1995 among all mothers regardless of college education, but the decline seems to have been more dramatic for college-educated mothers. The percentage of current smokers among mothers with a college education declined from 23.3 to 12.4 percent between 1976 and 1985, whereas the decline was only from 37.3 to 34.5 percent during the same period for those with less than a college education. Regardless of college education, the percentage of mothers who reported no doctor contacts over the previous two years changed little between 1976 and 1995, with 5.3 to 6.9 percent of college-educated mothers and 8.7 to 10.3 percent of less-than-college-educated mothers not visiting doctors over that period. There was an increase in obesity, particularly between 1985 and 1995, regardless of the mother's level of education. The percentage of mothers who were obese increased between 1985 and 1995 from 6.8 to 12.1 percent for the college-educated and from 12.3 to 19.0 percent for those with less than a college education. Exercise participation rates increased for both college-educated and less-than-college-educated mothers during the two decades. Between 1975 and 1995 the percentage of mothers who exercised increased from 54.2 to 72.1 percent for college-educated mothers and from 43.4 to 57.0 percent for less-than-college-educated mothers.² The percentage of mothers with less than a college education who reported fair or poor health declined dramatically between 1976 and 1985, from 15.1 to 9.4 percent, whereas it changed little during the period for mothers with a college education (from 4.6 to 3.4 percent). The percentage of less-than-college-educated mothers who missed one or more workdays owing to illness or injury increased slightly between 1985 and 1995, from 6.7 to 8.0 percent, whereas for college-educated mothers it declined during the period, from 8.5 to 4.7 percent.

Table 5.11 suggests a similar picture for fathers. College-educated fathers show better levels of health and health-related behaviors than less-than-college-educated fathers on all indicators in all years. In 1995 fathers with a college education, compared with fathers with less than a college education, were only 39 percent as likely to be smokers; only 82 percent as likely to have had no doctor visits in the previous two years; only 68 percent as likely to be obese; 26 percent *more* likely to exercise; only 27 percent as likely to report that they were in fair or poor good health; and only 80 percent as likely to have missed a day of work during the previous two weeks owing to illness or injury.

Trends among fathers from the mid-1970s to the mid-1990s suggest patterns similar to

TABLE 5.10 *Indicators of Health and Health-Related Behaviors for College-Educated Mothers and Less-Than-College-Educated Mothers, 1975 to 1976, 1985, and 1995*

		1975 to 1976	1985	1995
Current smoker				
Total sample	n/a	35.8%	35.0%	26.8%
College-educated	n/a	23.3	12.4	11.2
Less than college	n/a	37.3	34.5	27.8
Ratio college/less than college	n/a	0.62	0.36	0.40
No doctor visits in previous two years				
Total sample	n/a	8.3	9.9	8.9
College-educated	n/a	5.3	6.9	5.5
Less than college	n/a	8.7	10.3	9.7
Ratio college/less than college	n/a	0.61	0.67	0.56
Obese				
Total sample	n/a	9.6	11.0	18.2
College-educated	n/a	3.6	6.8	12.1
Less than college	n/a	10.3	12.3	19.0
Ratio college/less than college	n/a	0.35	0.55	0.64
Participation in leisuretime physical activities ^a				
Total sample	44.4%	n/a	56.7	59.9
College-educated	54.2	n/a	64.3	72.1
Less than college	43.4	n/a	55.5	57.0
Ratio college/less than college	1.25	n/a	1.16	1.26
Fair or poor health				
Total sample	n/a	14.0	7.5	7.0
College-educated	n/a	4.6	3.4	3.4
Less than college	n/a	15.1	9.4	10.7
Ratio college/less than college	n/a	0.30	0.36	0.32
At least one day absent from work due to illness in previous two weeks ^b				
Total sample	n/a	6.5	4.5	6.1
College-educated	n/a	7.2	8.5	4.7
Less than college	n/a	6.4	6.7	8.0
Ratio college/less than college	n/a	1.14	1.27	0.58
College-educated	9.4	10.6	13.4	19.3
Number of cases	3,346	6,478	7,630	3,887

Source: Authors' configuration.

^aIn any of the five activities: walking for exercise, lifting weights, jogging, riding a bicycle, and swimming.

^bCurrently employed mothers only.

those for mothers, with a few exceptions. As for mothers, there was a decline in smoking for both college-educated and less-than-college-educated fathers over the period. Again, the decline seems to have been more dramatic among college-educated fathers. The percentage with no doctor contacts over the previous two years seemed to increase between 1976 and 1985 but declined again between 1985 and 1995 to the 1976 level for both college-educated and less-than-college-educated fathers. Regardless of college education, there was an increase in obesity, particularly between 1985 and 1995. Exercise participation increased between 1975 and 1985 regardless of college education (from 54.9 to 67.1 percent for

TABLE 5.11 *Indicators of Health and Health-Related Behaviors for College-Educated and Less-Than-College-Educated Fathers, 1975 to 1976, 1985, and 1995*

		1975 to 1976	1985	1995
Current smoker				
Total sample	n/a	45.0%	31.5%	24.6%
College-educated	n/a	30.5	19.3	12.5
Less than college	n/a	48.3	39.5	31.9
Ratio college/less than college	n/a	0.63	0.49	0.39
No doctor visits in previous two years				
Total sample	n/a	18.8	25.0	21.6
College-educated	n/a	15.5	20.3	18.5
Less than college	n/a	19.6	26.3	22.7
Ratio college/less than college	n/a	0.79	0.77	0.82
Obese				
Total sample	n/a	8.4	11.6	17.7
College-educated	n/a	5.6	7.6	13.5
Less than college	n/a	9.0	12.0	19.8
Ratio college/less than college	n/a	0.62	0.64	0.68
Participation in leisuretime physical activities ^a				
Total sample	42.6%	n/a	53.5	54.0
College-educated	54.9	n/a	67.1	63.8
Less than college	39.8	n/a	49.6	50.5
Ratio college/less than college	1.38	n/a	1.35	1.26
Fair or poor health				
Total sample	n/a	11.7	8.6	9.3
College-educated	n/a	3.3	1.7	2.3
Less than college	n/a	13.6	9.1	8.6
Ratio college/less than college	n/a	0.24	0.19	0.27
At least one day absent from work due to illness in previous two weeks ^b				
Total sample	n/a	5.8	7.0	7.3
College-educated	n/a	4.0	4.1	5.2
Less than college	n/a	6.2	4.6	6.5
Ratio college/less than college	n/a	0.65	0.89	0.80
College-educated	18.3	18.3	22.0	26.2
Number of cases	2,956	5,842	4,718	2,355

Source: Authors' configuration.

^aIn any of the five activities: walking for exercise, lifting weights, jogging, riding a bicycle, and swimming.

^bCurrently employed fathers only.

college-educated fathers and from 39.8 to 49.6 percent for less-than-college-educated fathers), then declined between 1985 and 1995 among college-educated fathers. There was little change between 1975 and 1995 in reports of fair or poor health among fathers with a college degree (from 3.3 to 2.3 percent), whereas the percentage of those with less than a college education who reported fair or poor health declined between 1976 and 1995 (from 13.6 to 8.6 percent). There was little change in the percentage of fathers who missed workdays because of illness or injury over the period, regardless of educational level.

Tables 5.12 and 5.13 present results from logistic regressions for the six indicators of

TABLE 5.12 *Logistic Regression Coefficients Predicting Health and Health-Related Behaviors for Mothers, 1975 to 1976, 1985, and 1995*

	Current Smokers		No Doctor Visits During Previous Two Years		Obesity		Exercise Participation ^d		Subjective Health (Fair or Poor)		Work Loss Due to Illness During Previous Two Weeks ^e	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
College-educated	-1.02***	-0.70***	-0.49***	-0.46*	-0.61***	-0.94***	0.54***	0.46***	-0.98***	-1.03***	0.01	0.14
yr76 (reference) ^a	—	—	—	—	—	—	—	—	—	—	—	—
yr85	-0.21***	-0.16***	0.34***	0.34***	0.41***	0.39***	0.45***	0.46***	-0.33***	—	0.08	0.05
yr95	-0.47***	-0.43***	0.20*	0.22**	0.92***	0.88***	0.62***	0.58***	-0.27***	-0.34***	0.12	0.24
yr76 × college (reference) ^b	—	—	—	—	—	—	—	—	—	—	—	—
yr85 × college	—	-0.59***	—	0.02	—	0.34	—	-0.01	—	-0.27***	0.10	0.13
yr95 × college	—	-0.40*	—	-0.16	—	0.46	—	0.29	—	0.10	—	-0.68*
Controls												
Age	-0.01***	-0.01***	0.02***	0.02***	0.02***	0.02***	-0.02***	-0.02***	0.04***	0.04***	-0.003	-0.003
Married	-0.24***	-0.24***	-0.12	-0.11	0.01	0.005	-0.16***	-0.17***	-0.33***	-0.33***	-0.20*	-0.19*
Race ^c												
White (reference)	—	—	—	—	—	—	—	—	—	—	—	—
Black	-0.13*	-0.13*	-0.17	-0.17	0.85***	0.85***	-0.16**	-0.16**	0.93***	0.93***	0.05	0.05
Hispanic	-0.78***	-0.78***	0.34***	0.34***	0.22*	0.21*	n/a	n/a	0.54***	0.54***	-0.10	-0.11
Other race	-0.78***	-0.79***	0.69***	0.69***	-0.11	-0.11	-0.47***	-0.46***	0.50**	0.50**	0.10	0.09
Children under age six	-0.03	-0.03	-0.64***	-0.64***	-0.11*	-0.11*	-0.04	-0.04	-0.07	-0.07	0.14	0.14
Number of children	0.01	0.01	0.13***	0.13***	0.09***	0.09***	-0.03*	-0.03*	0.02	0.02	0.005	0.005
Employed	0.03	0.03	-0.07	-0.07	-0.16**	-0.16**	-0.20***	-0.20***	-0.60***	-0.60***	n/a	n/a
Intercept	0.22*	0.18*	-2.92***	-2.93***	-3.42***	-3.39***	0.75***	0.79***	-3.02***	-3.02***	-2.50***	-2.53***
-2 log likelihood ratio	714.88***	732.54***	312.32***	313.00***	582.29***	585.93***	498.13***	504.73***	1117.01***	1117.16***	11.14	20.66
df	11	13	11	13	11	13	10	12	11	13	10	12
Number of cases	17,614		17,856		17,655		14,656		17,943		9,800	

Source: Authors' configuration.

^ayr75 for exercise.

^byr75 × college for exercise.

^cIn the exercise analysis only (which uses the 1975 survey), Hispanics and "other race" are combined into one category as "other race."

^dIn any of the five activities: walking for exercise, lifting weights, jogging, riding a bicycle, and swimming.

^eCurrently employed mothers only.

* p < 0.05; ** p < 0.01; *** p < 0.001

TABLE 5.13 *Logistic Regression Coefficients Predicting Health and Health-Related Behaviors for Fathers, 1975 to 1976, 1985, and 1995*

	Current Smokers		No Doctor Visits During Previous Two Years		Obesity		Exercise Participation ^d		Subjective Health (Fair or Poor)		Work Loss Due to Illness During Previous Two Weeks ^e	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
College-educated	-0.95***	-0.79***	-0.28***	-0.28**	-0.51***	-0.49***	0.78***	0.70***	-1.34***	-1.25***	-0.28**	-0.47**
yr76 (reference) ^a	—	—	—	—	—	—	—	—	—	—	—	—
yr85	-0.44***	-0.41***	0.34***	0.35***	0.42***	0.43***	0.38***	0.35***	-0.23**	-0.21**	-0.23*	-0.29**
yr95	-0.77***	-0.71***	0.12*	0.10	1.02***	1.02***	0.42***	0.42***	-0.34**	-0.35***	0.14	0.09
yr76 × college (reference) ^b	—	—	—	—	—	—	—	—	—	—	—	—
yr85 × college	—	-0.21	—	-0.03	—	-0.04	—	0.18	—	-0.34	—	0.35
yr95 × college	—	-0.40**	—	0.07	—	-0.02	—	0.001	—	0.07	—	0.24
Controls												
Age	-0.01***	-0.01***	-0.01**	-0.01**	0.01***	0.01***	-0.02***	-0.02***	0.04***	0.04***	-0.007	-0.007
Married	0.33***	0.33***	-0.17*	-0.17*	0.55***	0.55***	-0.45***	-0.45***	0.18	0.18	0.19	0.19
Race ^c												
White (reference)	—	—	—	—	—	—	—	—	—	—	—	—
Black	0.07	0.07	0.12	0.12	0.22**	0.22**	0.07	0.07*	0.71***	0.71***	0.04	0.04
Hispanic	-0.37***	-0.37***	0.42***	0.43***	0.19*	0.19*	n/a	n/a	0.39***	0.40***	-0.41*	-0.41
Other race	0.10	0.11	0.48***	0.47***	-0.46*	-0.46*	-0.20**	-0.20*	0.25	0.25	-0.52	-0.53
Children under age six	-0.08*	-0.08	0.04	0.04	-0.14*	-0.14*	-0.02	-0.02	-0.11	-0.11	0.02	0.02
Number of children	-0.01	-0.01	0.03	0.03	0.06**	0.06**	-0.01	-0.01	0.02	0.02	-2.70***	-2.66***
Employed	-0.15**	-0.15*	0.33***	0.33***	-0.03	-0.03	-0.26***	-0.26***	-1.35***	-1.35***	32.52***	34.69***
Intercept	0.45***	0.40***	-1.48***	-1.48***	-3.39***	-3.39***	0.85***	0.86***	-2.77***	-2.78***	11	13
-2 log likelihood ratio	758.13***	766.63***	200.97***	201.54***	330.11***	330.17***	537.03***	540.45***	1300.16***	1302.09***	10	12
df	11	13	11	13	11	13	10	12	11	13	10	12
Number of cases	11,922		12,752		12,751		9,835		12,864		11,294	

Source: Authors' configuration.

^ayr75 for exercise.

^byr75 × college for exercise.

^cIn the exercise analysis only (which uses the 1975 survey), Hispanics and "other race" are combined into one category as "other race."

^dIn any of the five activities: walking for exercise, lifting weights, jogging, riding a bicycle, and swimming.

^eCurrently employed fathers only.

* p < 0.05; ** p < 0.01; *** p < 0.001

health and health-related behaviors for mothers and fathers, respectively. In each analysis, the samples from 1975 (for exercise only) or 1976 (for other health indicators), 1985, and 1995 are pooled. The number of cases varies depending on the indicator because of missing values. Model 1 shows the relationship between college education, the year of interview, and each indicator of health, controlling for age, race (non-Hispanic white, non-Hispanic black, Hispanic, and other race), marital status, presence of children under age six, number of children, and employment status (except for the analysis of work loss days, in which the sample is restricted to those who were employed). This model examines the educational differences and the trend in each health indicator. Model 2 includes interactions between the year of interview and college education. The purpose of this model is to test whether the differentials by college education changed over the period. All regressions are weighted.

The first column of table 5.12 suggests that, controlling for the year of interview and demographic variables (model 1), mothers with a college education were significantly less likely than mothers with less than a college education to be smokers. The effects of the year of interview suggest that there was a decline in smoking among mothers between 1976 and 1985 and between 1976 and 1995. Model 2 suggests that differences in the likelihood of current smoking between college-educated and less-than-college-educated mothers widened over the two-decade period, particularly between 1976 and 1985. There are significant interaction effects between college education and the year of interview for both 1985 and 1995. The coefficients for the interaction between college education and the year of interview are negative and greater for 1985 than for 1995.

The results for doctor visits, obesity, exercise participation, and subjective health show similar patterns. College-educated mothers were significantly less likely than less-educated mothers to have had no physician visits for over two years, less likely to be obese, more likely to participate in exercise activities, and less likely to report fair or poor health. Across time, fewer mothers had seen a doctor in the preceding two years and more mothers were obese, yet more mothers reported participating in exercise activities and fewer mothers reported fair or poor health. There were no significant interaction effects between college education and year of interview, suggesting that there was no significant change in the differential between college-educated and less-than-college-educated mothers in doctor visits, obesity, exercise participation, and subjective health.

Among employed mothers, the effect of college education on work days lost to illness or injury during the previous two weeks depended on the year of interview. Whereas model 1 shows no significant effects of college education on work loss due to illness or injury, model 2 shows a significant negative interaction effect between college education and the year 1995. This suggests that college-educated mothers in the mid-1990s were less likely than their counterparts in the mid-1970s to miss days from work owing to illness or injury, whereas less-than-college-educated mothers in the mid-1990s showed little change in work loss due to illness or injury compared with their counterparts in the mid-1970s (see the bivariate relationship in table 5.10).³

Table 5.13 shows similar results for fathers. As for mothers, less-educated fathers were more likely to be smokers at each point, and the gap widened between college-educated and less-educated fathers. There were no significant interaction effects between year of interview and college education for other indicators, although college-educated fathers reported better health behaviors and health status than less-than-college-educated fathers at each point.

In sum, college-educated mothers and fathers showed better health and health-related behavior than their less-than-college-educated counterparts on all indicators.

here. Trends in health-related behavior among parents suggest that both American mothers and fathers have developed better health-related behavior over time in terms of smoking and exercise but became less healthy in terms of obesity and physician contact from the mid-1970s to the mid-1990s. Also, fewer mothers and fathers reported fair or poor health in both 1985 and 1995 than in 1976. Fewer fathers missed days from work owing to illness or injury in 1985 than in 1976, although the level returned to the 1976 level in 1995. For mothers, there was little change between 1976 and 1995 in workdays lost to illness. On one health indicator, smoking, the differential between college-educated and less-educated parents widened between 1975 and 1995—the period of increased income inequality.

CONCLUSION

Since 1973, the earnings gap between college-educated and less-educated workers has grown, and family structure has changed dramatically, with more working mothers and more single-parents today than three decades ago. During this period of increased family change and growing income inequality, we speculated that we might find increased differentials in parental inputs to children between college-educated and less-than-college-educated parents. However, we also noted at the outset that some conditions, such as the rapid growth of maternal labor force participation among more highly educated, married mothers, might mitigate these differences.

We document a considerable inequality in parental investment in child-rearing by level of parents' education in each domain of parental investment examined in this chapter: child-oriented expenditures, parental time, and parental health behaviors. Our estimates suggest that in 1998 a child of a college-educated parent could expect 42 percent more in total expenditures and 245 percent higher expenditures on child care. In 1998 college-educated mothers averaged 17 percent more time with their children than less-than-college-educated mothers, and college-educated fathers spent 57 percent more time with their children than fathers without a college degree. In 1995 a child of a college-educated mother was only 40 percent as likely to live with a mother who smoked, only 56 percent as likely to have a mother who had no routine medical checkup during the previous two years, only 64 percent as likely to have a mother who was obese, 26 percent more likely to live with a mother who exercised, only 32 percent as likely to have a mother in fair or poor health, and only 58 percent as likely to have a mother who missed a day of work during the previous two weeks because of illness or injury. A child of a college-educated father was only 39 percent as likely to live with a father who smoked, only 82 percent as likely to have a father who had had no contact with a medical doctor for over two years, only 68 percent as likely to have a father who was obese, 26 percent more likely to live with a father who exercised, only 27 percent as likely to have a father in fair or poor health, and only 80 percent as likely to have a father who missed work during the previous two weeks owing to illness or injury.

What might we conclude about the trends in each of these indicators of parental investment during the period of growing income inequality? With respect to child-oriented expenditures, there was relatively little change in real dollar terms between 1988 and 1998 except that more was being spent on child care at the later point, when a greater percentage of parents were using some paid child care. Child-oriented expenditures did become more unequal, as measured by the Gini index, but the growth in this inequality was not closely linked to parental educational attainment. In fact, the effect of education on spending

the suggestion that parents may be able to protect their children from some of the effects of growing income inequality.

Trends in time spent with children were generally salutary (parents spent more time in child care activities) for both educational groups during the period of growing income inequality. We discovered that maternal time with children was relatively high in the 1960s, but then fell in the 1970s, rose in the 1980s, and fluctuated thereafter. College-educated mothers invested more time in child-rearing than less-educated mothers, other things being equal. However, this differential investment in child care did not grow larger during the period. Fathers' time in child care increased significantly after 1985 for both educational groups. Again, although college-educated fathers did more child care, the educational differential among fathers did not increase significantly during the period.

Finally, the changes in parental health were mixed, with positive trends in some indicators (reduced smoking, more exercise, and a decline in self-reported fair or poor health) for both educational groups, but negative trends in other indicators (a decrease in routine doctor visits and more obesity) for both education groups. Here again, although children of college-educated parents are advantaged, there is relatively little evidence that their advantage grew during the period 1975 to 1995, with the exception of smoking. Whereas the percentage of smokers among parents declined for both education groups from 1975 to 1995, the decline was significantly steeper for college-educated than less-educated parents. This finding is especially noteworthy because of the direct child health consequences of exposure to secondhand smoke and warrants further attention.

Overall, we found little evidence that the differences between the investments of college-educated and less-educated parents in their children grew wider over the period of rising income inequality. This suggests that even though some families are being economically squeezed, parents appear to find ways of protecting the resources they devote to their children when the household has fewer resources overall. To maintain the flow of resources to children, parents may scale back on expenditures in other domains of their lives, on time spent in non-child-care activities, and on at least some unhealthy behaviors, such as smoking. Meeting children's needs is probably a major—if not the top—priority of these families.

At the same time, because we examine the three domains of time, money, and health, the cumulative advantages of children of college-educated parents appear to be quite substantial. These children receive significantly greater parental investments in time and expenditures, and their parents are healthier. Therefore, growing inequality may not increasingly disadvantage children, but it does have implications for children. Future research could illuminate the multiplicity of advantages that accrue to children with better-educated, higher-income parents. The flow across generations remains very unequal by parents' educational attainment in the United States.

TABLE 5.A1 *Descriptive Statistics, Expenditure Analysis: Households with Children, 1988 to 1998*

	1988				1998			
	Mean	Standard Deviation	Minimum	Maximum	Mean	Standard Deviation	Minimum	Maximum
Spending variables								
Total all child categories	1,933.48	2,676.02	0	35,595.29	2,009.34	3,812.73	0	116,856.00
Logged	6.67	1.89	0	10.48	6.54	2.02	0	11.67
Day care and related expenses	589.68	1,555.89	0	24,182.15	968.19	2,270.25	0	26,700.00
Logged	2.26	3.24	0	10.09	4.04	3.21	0	10.19
Total less day care expenses	1,343.80	2,032.47	0	33,115.07	1,041.15	2,922.82	0	116,856.00
Logged	6.35	1.84	0	10.41	5.74	2.20	0	11.67
Clothing and shoes only	611.43	806.57	0	16,534.80	593.61	869.03	0	14,760.00
Logged	5.33	2.18	0	9.71	5.15	2.33	0	9.60
Household characteristics								
Expenditure rank	.58	.25	.00	1	.58	.23	.01	1
Financial assets (ln)	3.31	3.42	.32	12.64	3.04	3.38	.69	14.18
High school only	.58	.49	0	1	.59	.49	0	1
College degree or more	.21	.41	0	1	.24	.43	0	1
Black	.14	.35	0	1	.15	.35	0	1
Latino	.10	.30	0	1	.15	.35	0	1
Other races/ethnicity	.05	.21	0	1	.06	.23	0	1
Age	37.11	9.75	7	87	38.08	9.95	17	87
Single father	.02	.13	0	1	.02	.14	0	1
Single mother	.14	.35	0	1	.16	.37	0	1
Not own children	.10	.30	0	1	.12	.33	0	1
No earners	.07	.25	0	1	.06	.23	0	1
Two or more earners	.62	.48	0	1	.59	.49	0	1
Children under age two	.25	.47	0	2	.22	.44	0	2
Children age two to fifteen	1.60	1.03	0	9	1.63	1.00	0	8

Source: Authors' configuration.

Notes: Spending is annual consumer unit spending per child under fifteen, in 1998 dollars. Number of cases: 1988—3, 775; 1998—4, 501.

TABLE 5.A2 Means for Variables in Time Diary Analysis for Mothers and Fathers, 1965, 1975, 1985, 1995, 1998, and 2000

	Mothers	Fathers
College-educated	0.17	0.23
Age	35.65	37.60
Married	0.74	0.87
Children under age six	0.45	0.45
Number of children	2.02	2.02
Employed	0.57	0.89
Weekly hours employed	18.50	37.20
Number of cases	3,012	2,109

Source: Authors' configuration.

Note: Means are weighted.

TABLE 5.A3 Means for Variables in Health Analysis for Mothers and Fathers, 1975 to 1976, 1985, and 1995

	1975, 1985, 1995 (Exercise Only)		1976, 1985, 1995 (Other Health Indicators)	
	Mothers	Fathers	Mothers	Fathers
College-educated	0.14	0.22	0.14	0.21
Age	35.48	37.24	35.99	37.77
Married	0.75	0.86	0.75	0.87
Race				
White	0.75	0.78	0.75	0.78
Black	0.14	0.11	0.14	0.11
Hispanic	0.11 ^a	0.11 ^a	0.09	0.09
Other race			0.03	0.03
Children under age six	0.48	0.48	0.49	0.48
Number of children	2.07	2.07	2.17	2.15
Employed	0.56	0.88	0.55	0.87
Number of cases	14,863	10,029	17,995	12,915

Source: Authors' configuration.

Note: Means are weighted.

^aIncludes "other race."

NOTES

The "core" of the 1975 National Health Interview Survey is composed of 41,649 households containing 116,289 persons. The 1975 PFS is drawn from the core person file using a multistage probability sampling of all persons age eighteen or older in the households ($n = 11,741$). The core of the 1976 NHIS consists of 41,559 households containing 113,178 persons. The 1976 HHS is drawn from the core person file using multistage probability sampling of all persons age nineteen or older in the households ($n = 23,088$). The core of the 1985 NHIS is composed of 36,399 households containing 91,531 persons with an oversampling of the black population. One adult, age eighteen or older, is selected from each family for the 1985 HPDP supplement ($n = 33,630$). The core of the 1995 NHIS is composed of 41,824 households containing

102,467 persons with oversampling of black and Hispanic populations. In the 1995 Year 2000 Objectives supplement, one adult in half of the households was interviewed ($n = 17,317$).

2. We cannot be totally confident about the estimated increase between 1975 and 1985 because of the unknown effect of the change in question wording.
3. We are cautious about these findings because the goodness-of-fit tests suggest that our models do not fit well in predicting whether mothers missed days from work because of illness or injury.

REFERENCES

- Aldous, Joan, Gail M. Mulligan, and Thoroddur Bjarnason. 1998. "Fathering over Time: What Makes the Difference?" *Journal of Marriage and the Family* 60: 809-20.
- Barker, David J. P., and Charles Osmond. 1986. "Infant Mortality, Childhood Nutrition, and Ischemic Heart Disease in England and Wales." *The Lancet* 1: 1077-81.
- Barnett, Rosalind C., and Grace K. Baruch. 1987. "Determinants of Fathers' Participation in Family Work." *Journal of Marriage and the Family* 49: 29-40.
- Becker, Gary. 1981. *A Treatise on the Family*. Cambridge, Mass.: Harvard University Press.
- Becker, Gary, Elizabeth M. Landes, and Robert T. Michael. 1977. "An Economic Analysis of Marital Instability." *Journal of Political Economy* 85: 1141-87.
- Bianchi, Suzanne M., Melissa Milkie, Liana Sayer, and John Robinson. 2000. "Is Anyone Doing the Housework? Trends in the Gender Division of Household Labor." *Social Forces* 79: 191-228.
- Blau, Peter M., and Otis D. Duncan. 1967. *The American Occupational Structure*. New York: John Wiley.
- Branch, E. Raphael. 1994. "The Consumer Expenditure Survey: A Comparative Analysis." *Monthly Labor Review* 117(12): 47-55.
- Cancian, Maria, and Deborah Reed. 1999. "The Impact of Wives' Earnings on Income Inequality: Issues and Estimates." *Demography* 36(May): 173-84.
- Chevan, Albert, and Randall Stokes. 2000. "Growth in Family Income Inequality, 1970 to 1990: Industrial Restructuring and Demographic Change." *Demography* 37(August): 365-80.
- Cohen, Philip N., and Suzanne M. Bianchi. 1999. "Marriage, Children, and Women's Employment: What Do We Know?" *Monthly Labor Review* 122(12, December): 22-31.
- Cooney, Teresa M., Frank A. Pedersen, Samuel Indelicato, and Rob Palkovitz. 1993. "Timing of Fatherhood: Is 'On-Time' Optimal?" *Journal of Marriage and the Family* 55: 205-15.
- Cramer, James C. 1987. "Social Factors and Infant Mortality: Identifying High-Risk Groups and Proximate Causes." *Demography* 24: 299-322.
- Duncan, Dudley, David Featherman, and Beverly Duncan. 1972. *Socioeconomic Background and Achievement*. New York: Seminar Press.
- Federman, Maya, Thesia I. Garner, Kathleen Short, W. Bowman Cutter, John Kiely, David Levine, Duane McDough, and Marilyn McMillen. 1996. "What Does It Mean to Be Poor in America?" *Monthly Labor Review* 119(5): 3-17.
- Fisher, Kimberly, Andrew McCulloch, and Jonathan Gershuny. 1999. "British Fathers and Children." Unpublished paper. (December). Institute for Social and Economic Research, University of Essex, UK.
- Haddad, Tony. 1994. "Men's Contribution to Family Work: A Reexamination of 'Time Availability.'" *International Journal of Sociology of the Family* 24: 87-111.
- Haveman, Robert, and Barbara Wolfe. 1994. *Succeeding Generations: On the Effects of Investments in Children*. New York: Russell Sage Foundation.
- Hill, C. Russell, and Frank P. Stafford. 1985. "Parental Care of Children: Time Diary Estimates of Quantity, Predictability, and Variety." In *Time, Goods, and Well-being*, edited by F. Thomas Juster and Frank P. Stafford. Ann Arbor: University of Michigan, Institute for Social Research.
- Hummer, Robert A. 1993. "Racial Differentials in Infant Mortality in the U.S.: An Examination of Social and Health Determinants." *Social Forces* 72: 529-54.
- Ishii-Kuntz, Masako, and Scott Coltrane. 1992. "Predicting the Sharing of Household Labor: Are Parenting and Housework Distinct?" *Sociological Perspectives* 35: 629-47.
- Jencks, Christopher. 1972. *Inequality*. New York: Harper & Row.

- hn, Chinhui, Kevin Murphy, and Brooks Pierce. 1993. "Wage Inequality and the Rise in Returns to Skill." *Journal of Political Economy* 101(3): 410-42.
- almijn, Matthijs. 1991. "Shifting Boundaries: Trends in Religious and Educational Homogamy." *American Sociological Review* 56(6): 786-800.
- aroly, Lynn A., and Gary Burtless. 1995. "Demographic Change, Rising Earnings Inequality, and the Distribution of Personal Well-being, 1959 to 1989." *Demography* 32: 379-406.
- tagawa, Evelyn M., and Philip M. Hauser. 1973. *Differential Mortality in the United States: A Study in Socio-economic Epidemiology*. Cambridge, Mass.: Harvard University Press.
- zear, Edward P., and Robert T. Michael. 1988. *Allocation of Income Within the Household*. Chicago: University of Chicago Press.
- ibowitz, Arleen. 1974. "Home Investments in Children." *Journal of Political Economy* 82(2): S111-31.
- vy, Frank. 1998. *The New Dollars and Dreams*. New York: Russell Sage Foundation.
- no, Mark. 1994. "Income and Spending Patterns of Single-Mother Families." *Monthly Labor Review* 117(5): 29-37.
- re, Robert. 1995. "Changes in Educational Attainment and School Enrollment." In *State of the Union*, vol. 1, edited by Reynolds Farley. New York: Russell Sage Foundation.
- rsiglio, William. 1991. "Paternal Engagement Activities with Minor Children." *Journal of Marriage and the Family* 53: 973-86.
- yer, Susan. 1997. *What Money Can't Buy: Family Income and Children's Life Chances*. Cambridge, Mass.: Harvard University Press.
- yer, Susan, and Christopher Jencks. 1989. "Poverty and the Distribution of Material Hardship." *Journal of Human Resources* 24(1): 88-114.
- lanahan, Sara, and Gary Sandefur. 1994. *Growing Up with a Single Parent: What Hurts? What Helps?* Cambridge, Mass.: Harvard University Press.
- urray, Charles. 1984. *Losing Ground: American Social Policy, 1950 to 1980*. New York: Basic Books.
- tional Heart, Lung, and Blood Institute. 1998. *Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults*. Bethesda, Md.: National Heart, Lung, and Blood Institute.
- penheimer, Valerie K. 2000. "The Continuing Importance of Men's Economic Position in Marriage Formation." In *The Ties That Bind: Perspectives on Marriage and Cohabitation*, edited by Linda J. Waite, Christine Bachrach, Michelle Hindin, Elizabeth Thomson, and Arland Thornton. New York: Aldine de Gruyter.
- ck, Joseph H. 1981. *The Myth of Masculinity*. Cambridge, Mass.: MIT Press.
- ston, Samuel H., and Paul Taubman. 1994. "Socioeconomic Differences in Adult Mortality and Health Status." In *Demography of Aging*, edited by Linda D. Margin and Samuel H. Preston. Washington, D.C.: National Academy Press.
- is, Catherine R., and John Mirowsky. 1999. "Refining the Association Between Education and Health: The Effects of Quality, Credential, and Selectivity." *Demography* 36: 445-60.
- is, Catherine R., and Chia-ling Wu. 1995. "The Links Between Education and Health." *American Sociological Review* 60(5): 719-45.
- dbert, John F., and Sandra Hofferth. 2001. "Changes in Children's Time with Parents, United States, 1981 to 1997." *Demography* 38: 423-36.
- , Lucilla. 2000. "Spending Patterns of Public Assisted Families." *Monthly Labor Review* 123(5): 29-35.
- mer, Susan Goff, Jacquelynne Eccles, and Keith O'Brien. 1985. "How Children Use Time." In *Time, Goods, and Well-being*, edited by F. Thomas Juster and Frank P. Stafford. Ann Arbor: University of Michigan, Institute for Social Research.
- erson, Debra. 1987. "Family Status and Health Behaviors: Social Control as a Dimension of Social Integration." *Journal of Health and Social Behavior* 28: 306-19.
- . Department of Labor. 1998. "Consumer Expenditure Survey, Interview Survey." Washington: Bureau of Labor Statistics.
- ing, Brenda, and Jay Belsky. 1991. "Multiple Determinants of Father Involvement During Infancy in Dual-earner and Single-Earner Families." *Journal of Marriage and the Family* 53: 461-74.
- lsworth, M. E. 1986. "Serious Illness in Childhood and Its Association with Later-Life Achievement." In *Class and Health*, edited by Richard G. Wilkinson. London: Tavistock.
- Wickrama, K. A. S., Rand D. Conger, Lora Ebert Wallace, and Glen H. Elder Jr. 1999. "The Intergenerational Transmission of Health-Risk Behaviors: Adolescent Lifestyles and Gender Moderating Effects." *Journal of Health and Social Behavior* 40: 258-72.
- Williams, David R. 1990. "Socioeconomic Differentials in Health: A Review and Redirection." *Social Psychology Quarterly* 53: 81-99.
- Wilson, William Julius. 1987. *The Truly Disadvantaged*. Chicago: University of Chicago Press.
- . 1996. *When Work Disappears*. New York: Knopf.
- Yeung, W. Jean, John F. Sandberg, Pamela Davis-Kean, and Sandra L. Hofferth. 2001. "Children's Time with Fathers in Intact Families." *Journal of Marriage and the Family* 63(1): 136-54.
- Zick, Cathleen D., and W. Keith Bryant. 1996. "A New Look at Parents' Time Spent in Child Care: Primary and Secondary Time Use." *Social Science Research* 25: 260-80.
- Zill, Nicholas. 1999. *Setting an Example: The Health, Medical Care, and Health-Related Behavior of American Parents*. Washington, D.C.: Child Trends.
- . 2000. "Parents' Health and Risky Behaviors." In *Research Brief*. Washington, D.C.: Child Trends.