Chapter 14: HOW CHILDREN USE TIME

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The 1981-82 time allocation data base contains the unique feature of incorporating data on children’s time use, as well as comparison data on family environmental characteristics and behaviors related to the developmental process. In this chapter, we examine the data on children’s time use, discussing in turn methodological issues, parental time use as it relates to children, and the parental age, sex and other background characteristics that relate to children’s time uses.

SURVEY DESIGN

The data on children’s time use were obtained from the 1981-82 panel follow-up of 1975-76 households. As noted earlier, eligible respondents were those with at least three out of four possible waves of interviews in 1975 (N=922). In the 1981-82 study, both respondents and their spouses (if present) completed 24-hour, open-blocked time diaries (i.e., they reported activities sequentially with time estimates attached to each activity) during each wave of interviewing. In addition, a good deal of supplementary information was obtained. Considerably more of the supplementary information was obtained from both respondent and spouse in 1981 than in 1975, particularly on measures of family functioning. In addition, time diaries and questionnaires were administered to the children of respondents: up to three children falling between the ages of three and seventeen were interviewed.

Households were contacted four times from February through December, 1981, at intervals of approximately three months. The first contact was a personal interview, with the telephone being used to contact most respondents in subsequent waves. But because certain measures relating to children had to be administered in person (e.g., reading comprehension tests), families with children were contacted personally throughout, as were a few other cases—e.g., older people with hearing problems.

Nature of the Questionnaire

The questionnaire administered to children had two components: the time diary, and a standardized interview. Children were interviewed twice. In Wave 1, only the time diary was administered to children; in Wave 3, both the time diary and the standardized interview were administered. Additional information was obtained on each child from the most knowledgeable adult in the household.

Time diary. The children’s diary was modeled after the adult diary. Children are asked to report sequentially what they did (beginning at 12:00 a.m. the previous night), when each activity had begun and finished, where they were at the time, whether they were with anyone, and whether they were doing anything else at the same time.

Children’s activities could be coded into one of 223 different categories. These 223 activities were collapsed further into more general activity categories. Only those activities in which children did not engage are not represented in these 38 categories (i.e., attending union meetings, meetings of professional organizations, etc.).

Child interview. In addition to the time diaries, the child interview included a wide range of questions. We obtained...
information about intellectual functioning by administering the reading comprehension test of the Wide Range Achievement Scale, and by asking the older children how well they were doing in different areas of their school work. Some questions assessed the quality of family life by probing perceived family cohesiveness, decision-making styles, family organization, and patterns of television use. We asked the older children about educational and occupational aspirations, and how much importance they attached to dating, marrying, having children, going to college, and having a career. Questions for assessing sex-role stereotypes asked who the children thought should do certain household tasks. A section on children’s attributions for success and failure in their best and worse school subject was also included. In sum, we asked a variety of questions related to children's psychological well-being: their hopes and goals, attitudes, and beliefs, their current intellectual and emotional well-being, and their family environment.

The total number of questions varied with the age of the child, with older children being asked more detailed questions. Preschool children were not actually interviewed; instead, their parents provided information about what they did the previous day. Children in first through third grade completed the time diary with their parents' help, and also completed a measure of reading comprehension. Children in fourth grade or above provided their own diary information, and answered a series of survey questions regarding their family life, how well they were doing in school and why, what things they thought were important in life, and their educational and occupational aspirations. In addition to these questions, junior and senior high school students were asked about school involvement, and family decision-making patterns. In addition, high school students were asked about their work experiences. In sum, the older the child, the more questions asked.

Parent Interviews. During the third wave additional information about each child and about the family was gathered from either the most knowledgeable parent (typically the mother) or from both parents in two-parent households. Parents were asked to evaluate their children's socio-emotional and intellectual development. They provided causal attributions of the academic successes and failures of their older children. They were asked their educational and occupational aspirations for each of their children. In addition, they were asked how important was participation in work and family roles for sons and daughters.

Teacher Survey. A short survey was sent to a teacher of each of the school-age children. This survey asked the teachers to evaluate the child's socio-emotional and intellectual development. Of 335 school-age children with two waves of data, 61% (N=205) also have evaluations of their performance by teachers.

Issues in Using Children's Time-Use Data

The following paragraphs will discuss issues relating to the meaning and quality of the data provided by the children in our sample. We will discuss the reliability of the children’s interviews from the perspective of the child's ability to report accurate information, as well as the reliability of the 24-hour time diary estimates as an indicator of children's time use.

Reliability of children's time diaries. Time diaries were gathered from children aged 3 to 17 years, but only children 6 to 17 years old provided the information directly. Many children aged 6 to 8 years related the previous day's activities with the help of one of their parents. In 90% of interviews with children aged 6-8, a mother was present. In 8% of interviews, the mothers gave no information, in 30% she gave "some," and in 46% she gave most or all of the information.
use should differ by the child's age (see Table 13.1). For example, older children report more time spent reading, studying, doing housework, watching television and playing sports than younger children, less time sleeping. Other researchers have been concerned about whether children have the cognitive capacity to recall time allocations (e.g. Medrich et al., 1980). Since Medrich and his colleagues believed that children did not, they designed their study of children's time use accordingly. We felt it was very important to involve the children as informants as much as possible. Consequently, we tried to sidestep the problem of children's cognitive immaturity by allowing parents to participate in their younger children's interviews.

While time diaries of the younger children appear reasonable, in retrospect it does not seem worthwhile to gather 24-hour time diaries from parents for their 3 to 5 year olds for several reasons. First, the parent may not be able to provide reliable information about what the child is doing during a 24-hour period. For example, if the parent reporting the child's activities (most often the mother) is not home during the day watching the child, rather vague information is conveyed about what the child did. Some parents simply say that the child was at nursery school, some say they do not what the child was doing. Large amounts of unaccountable time translate into large proportions of time recorded in one activity (such as "school time"), or of "NA" time (i.e., activity not ascertainable by either the parent, interviewer, or coder). Either way we do not obtain any information about the child's particular activities. An example of a diary in which the parent does not really know what her child is doing might look like the following:

12:00 a.m. - 8:00 a.m. sleeping
8:00 a.m. - 8:30 a.m. got dressed and ate
8:30 a.m. - 8:45 a.m. drove to nursery school
8:45 a.m. - 1:00 p.m. at nursery school
1:00 p.m. - 3:15 p.m. drove home
3:15 p.m. - 3:30 p.m. changed clothes
3:30 p.m. - 4:50 p.m. played outside
4:50 p.m. - 5:00 p.m. helped set table for dinner
5:00 p.m. - 5:30 p.m. ate dinner
5:30 p.m. - 5:45 p.m. talked to brother
5:45 p.m. - 6:00 p.m. colored in coloring book
6:00 p.m. - 7:30 p.m. watched television
7:30 p.m. - 12:00 a.m. sleeping

The parent shows a general knowledge about where the child is and what she/he is doing during the day, but cannot relate much detail about the child's activities. More specificity is obtained from the parent about the child's activities during the time when both the parent and child are home. If we just wanted to know how much time on an average a child spends sleeping, in nursery school or daycare, and playing, we could ask a series of "stylized" questions (see Chapter 3) more quickly, and perhaps as reliably.

Second, we need to consider the kinds of information we want to get regarding young children's time use. If we want to know what young children do when they play, or what parents and children do when they are together, then it might be better to tailor a diary to these activities, getting detailed reports of time the children spend with their parents, or a child's activities during a typical play period.

Assessing the actual reliability of children's time diaries is not an easy task. Setting aside using an observer to test the accuracy of recall directly, there are no established methods of determining reliability in the strictest sense of the word. We have used a number of indirect methods that rely on converging evidence to provide a rough sense of reliability.

One method, advocated by the team of Swedish time use researchers at the International Time Use Workshop (Ann Arbor, 1982), calculates the number of different types of activities recorded in a diary. This method provides a sense of the variety
and specificity of response. Other researchers simply use the number of activities recorded. This method provides a sense of the density of people's responses. We present both types of figures in Table 13.1, broken down by the age of the child to compare diaries obtained with and without parental help.

Table 13.1
NUMBER AND VARIETY OF ACTIVITIES
THAT CHILDREN REPORT IN WEEKDAY
AND WEEKEND DAY DIARIES

<table>
<thead>
<tr>
<th>Age of Child</th>
<th>3-5 yrs N=67</th>
<th>6-8 yrs N=69</th>
<th>9-11 yrs N=93</th>
<th>12-14 yrs N=73</th>
<th>15-17 yrs N=87</th>
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<tr>
<td>Weekday:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of activities</td>
<td>24.0</td>
<td>25.4</td>
<td>26.2</td>
<td>26.7</td>
<td>27.5</td>
</tr>
<tr>
<td>Variety of activities</td>
<td>12.9</td>
<td>13.8</td>
<td>14.0</td>
<td>14.3</td>
<td>14.5</td>
</tr>
<tr>
<td>Weekend:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of activities</td>
<td>26.4</td>
<td>28.9</td>
<td>27.9</td>
<td>30.1</td>
<td>32.1</td>
</tr>
<tr>
<td>Variety of activities</td>
<td>13.4</td>
<td>14.5</td>
<td>14.4</td>
<td>15.3</td>
<td>16.4</td>
</tr>
</tbody>
</table>

Figures in Table 13.1 show an increase in both the numbers and variety of activities by the age of the child on weekend days. This effect could reflect a developmental increase in the number and variety of children's activities. Alternatively, it could mean that our coding scheme does not provide very precise descriptions of the activities of very young children (although our coding scheme is much more detailed than those developed to date). For example, young children spend large amounts of time playing (see Table 13.5). "Playing" is defined as outdoor play, indoor play, playing with toys, and pretend play. The majority of children's play time falls into the categories of indoor and outdoor play, which are fairly general categories. In contrast, older children did not report much time "playing." They reported spending much more time playing "sports," for which there is a large assortment of codes. Consequently, when totaling up the number of different activities reported, young children will appear to have less variety than older children even if the young children actually engage in a wide variety of play activities. In support of this alternative explanation of the age difference in variety of activities reported, the number of weekday diary activities reported and the amount of time reported as "playing" are negatively related (r = -.11, p < .05).

In addition to comparisons across age groups of children, we can compare the number of activities that children report with an estimate of the number of activities reported by adults on weekdays and weekend days. In the 1981 survey, respondents reported more and a greater variety of weekday activities than do children; on weekends, however, the reverse is true. This pattern suggests little difference in the reliability of adult and child diaries. Rather it suggests more subtle differences in adult and child activity patterns, or perhaps the salience of weekends and weekdays. Additionally, reports from interviewers indicated that children enjoyed telling interviewers what they did all day long. They did not seem to tire in the telling of their day, even though it often took them as long as 20 minutes to complete their story.

All the information we have available to us indicates that children and parents are able to provide interviewers with good information about their activities. Children like talking about their activities. They seem to give, on average, as much information about themselves as adults, and their time estimates conform to our intuitions regarding how children use their time. There may be better ways of getting detailed information about
the activities of the very youngest group. However, one advantage to having similar measures for all age groups (as we do) is that we can compare time use in children across all age groups, instead of being limited to analyses within subgroups of children.

**Issues Relating to Accuracy of Interpreting Differences in Children's Time Use**

So far our discussion has focused on children's and parent's ability to provide rich and varied descriptions of children's time use. We will now discuss the interpretability of differences in time spent in low frequency activities, the meaning of possibly misleading codes, and developmental effects masked by the process of coding.

Table 13.2 shows the number of children that actually engage in the different activities on weekdays and weekend days. This table illustrates the kinds of activities generally reported in a time diary, and those not reported. Activities mentioned by fewer than 10% of the sample meet standard criteria for skewness, and can be considered as not well estimated for individual households by time diaries. These activities include babysitting, obtaining services (going to the bank, doctor, dentist, cleaners, etc.), helping others, being at the babysitter's or daycare, participating in functions of helping organizations, attending events (movies, concerts, museums), doing hobbies, and being read to. Some of these activities show low frequencies because they are not frequently or regularly done (i.e., the probability that a day would be sampled in which the activity would not be done is high). Others show low frequency because the activities are likely to be recorded as a secondary activity rather than a primary activity.

Attending "events," doing hobbies, and attending meetings are examples of the first case. They are activities that are done infrequently but may consume a lot of time when they are actually engaged in. The time both adults and children spend
doing these activities is probably inaccurately represented for individual households by the 24-hour time diary, although at the population level the time estimates accurately represent the proportion of time allocated to these activities. Alternative strategies should be developed to capture these activities.

In contrast, being at the babysitter's or at daycare are "low priority codes"—they are only coded when no other activity is reported. If the child says that he or she was playing while at daycare, then "playing" was coded, and the fact that the child was at the daycare center is captured by the response to the question, "Where were you?" Since we have not yet coded the responses to this question, our activity estimates undoubtedly underestimate the time children spend at these locales. Daycare is also underestimated because parents seem to include it under the category of "at school" rather than "at daycare." Again, more detailed probing may be necessary to get a more accurate estimate of the time children spend at these types of locations.

Activities such as "conversations with household members," "visiting," and "listening to the radio" are often reported as secondary activities. "Visiting," for example, means that the child was talking with someone while somewhere other than home. That younger children are less likely than older children to "visit" may say something about the importance of conversation in older children's social relations rather than the amount of time the children were actually visiting at someone else's house.

Other activities, such as market work and taking care of children, are simply not done by many children. Consequently, the low frequency estimates in Table 13.2 are probably an accurate reflection of the occurrence of these events in different age groups. But the time estimates based on populations means will have large sampling errors because of the highly skewed distribution, and the diary measures for individual households will tend to be quite unreliable estimates of the overall allocation of time to these activities.

One characteristic of young children's behavior that cannot be directly captured by the time diary is the degree to which activities are shared and supervised by parents. For example, a 5 year old boy may say that he "helped his mother fix dinner" by sitting on a stool in the kitchen licking spoons; a 15 year old boy might give the same response because he set the table or made the salad. Both children would receive the code for meal preparation, regardless of the degree to which their activities really described what we as adults mean by meal preparation. Their activities were coded the same because they both claimed to be helping to fix dinner. This example alerts the reader to the possibility that different aged children may report doing the same thing (thus receiving the same code) when the activities were actually quite different. Since this is a problem of bias in reporting, it cannot be eliminated without additional information from a trained observer. Its potential influence on the data should, however, be noted and age-related inferences based on these data should therefore be made with caution.

Age differences in behavior might also be understated by the diary because of the variety of behavior subsumed under one code. For instance, there is no difference among age groups in the amount of time that children report they spent in artistic activities (see Table 13.5). However, there is a substantial difference in the kinds of activities which might properly be considered "artistic" for children of various ages. In this case younger children spend time "painting and drawing," which really means coloring and painting with water colors. Older children's artistic activities are much closer to the adult meaning of the code.

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In sum, issues concerning the nature of activities reported by different aged children raise questions about the kind of information we can expect to get from children's diaries. While some age effects emerge in Table 13.2 (note the differential participation by age in household work, sports, playing, listening to music, and reading), other age differences may be masked by the coding procedures and by shifts in response biases.

PARENTS' TIME USE

The following section will outline some of the ways in which mothers and fathers use their time. The reason for including a section on parents' use of time in a chapter on children's time use is to provide a context for understanding children's behavior. We will discuss general differences between mothers' and fathers' time allocation, and parents' time use as it varies by maternal employment status, parents' educational attainment, and the number of babies in the household.

On the whole, when mothers' and fathers' time use differs, it predictably varies according to sex-role stereotypes. Fathers work longer hours in the labor market than mothers. On the other hand, mothers spend substantially more time than fathers doing household work and taking care of their children (as measured by time spent in child care activities). Mothers and fathers spend similar amounts of time in leisure activities like reading, listening to music, sports and other recreational activities, and watching television. Television viewing is the most time-consuming leisure activity for parents—an average of an hour and a half on a weekday, and even more (for fathers) on weekend days.

In sum, the amount of time mothers and fathers allocate to different household and market work activities varies in a traditional sex-typed manner. The bulk of hours which parents contribute to the paid labor force is contributed by fathers, and most of the work done inside the home is contributed by mothers. This is in keeping with other findings (Walker & Woods, 1976; Hill, 1983; Veroff, Douvan & Kulka, 1981), and with the data reported in Chapters 6, 9, 10 and 12. Parents' allocation of time to nonwork activities does not appear to vary significantly according to the sex of the parent, with one exception. Fathers watch more television than mothers on weekends.

Maternal Employment and Parents' Use of Time

While a mother's employment status has a substantial effect on the way a mother uses her time, it does not seem to notably influence fathers' time use. For instance, employed mothers spend considerably less time during the week doing housework than nonemployed mothers, less total time taking care of children, less time eating and sleeping, and more time in personal care activities. Fathers whose wives are employed differ from other fathers in only two ways: they are less likely to spend time taking care of a baby (and probably less likely to have a baby), and less likely to go grocery shopping and do other household errands. Since employed mothers spend many fewer hours in a week than nonemployed mothers doing housework, and their respective husbands (and children, as we will see) do not differ in their contribution to household work, we conclude that dual-earner families as a whole spend less in household production than single-earner families. Either dual- and single-earner families have different standards of cleanliness, dual-earner families have less household work to do than single-earner families, or they are more efficient or better organized workers.

Nonemployed mothers spend more time taking care of a baby and playing with their children. This difference in time use reflects the greater likelihood for nonemployed mothers to have preschool children in the household.

Parents' Educational Attainment and Use of Time

What difference does a parent's educational attainment make on how a mother or father spends their time? College-educated parents spend more time reading to their children than lesser
educated parents, and they watch less television. Additionally, college-educated mothers are more likely to be in school and to spend time studying than other mothers.

Although there are few differences in parents' time use according to their educational attainment, those that exist have important implications for children's social and cognitive development. When parents spend time reading to their children, they expose their children to a more diverse language use and nurture reading skills. They also communicate their value and enjoyment of reading. Similarly, mothers pursuing additional education may communicate their value of educational attainment. They may also provide their children—particularly their daughters, with a model for being an interested learner. Similarly, mothers pursuing additional education may communicate their value of educational attainment. They may also provide their children—particularly their daughters, with a model for being an interested learner.

Mothers' Marital Status and Mothers' Time Use

The most noticeable difference between single and married mothers in our sample is that single mothers spend more time in market work than married mothers. On average, single mothers devote about six hours a day and married mothers devote about three and a half hours a day to work in the labor force.

Single and married mothers differ in their use of discretionary time in one important way. Single mothers spend significantly more time than married mothers watching TV on weekends, when single mothers spend an average of about two and a half hours watching compared with married mothers' roughly one and a half hours of television watching time. Why do single mothers spend so much time watching television on weekends? Television may be an activity that single mothers and their children do as a way to spend time together. And indeed, when we get to the section on children's time use, we will discover that children of single mothers watch more television on weekends than other children, suggesting that this hypothesis may be correct.

Presence of Babies in the Household and Parents' Time Use

Up to now we have focused on differences among parents and the effects on their time use in order to provide a context within which to interpret differences in children's time use. Analyses of parents' time use according to the presence of babies (children 3 years or younger) gives us a sense of the way family structure might affect parents' time use and the impact a baby has on parents.

Mothers and fathers of a baby both spend considerably more time doing activities related to child care than do other parents. Among mothers of at least one baby it is possible to detect a reorganization of work and family activities. On the average, mothers with babies are less likely to work than other mothers; also, if a mother with a baby works, she is likely to work fewer hours than other mothers. Interestingly, women who have a baby are likely to spend more time talking to and visiting with nonhousehold members on weekdays. This pattern of results for mothers of babies suggests suspension of labor market activities and adjustment to the lack of contact with coworkers by establishing alternative communication networks to reduce feelings of isolation.

Based on our observations of the effect of the presence of babies in the household on parents' time, there are several ways in which older children's time might be affected by the presence of a baby. If there is little flexibility in parents' schedules for expanding their time allocation to activities directly involving their children, then the amount of attention an older child receives from his or her parents might be greatly diminished. If the presence of babies spurs the parents to spend more time together as a family, or if the parents eliminate some activities in favor of family or child care activities, then the
attention older children receive would increase when a baby was born.

These descriptions of parents' time use according to maternal employment and marital status, parents' educational attainment and the presence of babies in the household give us an idea of the different family contexts within which children develop. Since parents' work activities generally conform to sex-role stereotypes, we expect to observe similar patterns among their children. We also expect that the time allocations of children with high school educated parents will differ from children of more highly educated parents in ways similar to differences observed in the parents. There were few differences in parents' activities according to the mothers' working status, we do not expect many differences in their children's activities, except perhaps that preschool children should spend more time in nursery school or daycare. Neither do we expect to observe many differences between children with married and single mothers, because the structure of mothers' time use does not look substantially different, even though the family structure differs. With these hypotheses in mind, we will investigate the differences in children's time use according to these same family characteristics.

CHILDREN'S TIME USE

What do children do all day? We begin to get a picture of how children use their time by looking at Tables 13.3 and 13.4, showing the hours and minutes spent in a selection of primary activities on weekdays and weekend days. On weekdays, children spend at least one-third of their day sleeping, approximately 20 percent of their day in school, and 10% of their day eating, washing, dressing and participating in other personal care activities. In sum, about two-thirds of a child's weekday is consumed by nondiscretionary activities. On weekends, roughly half of a child's time is spent in nondiscretionary activities, with some variation depending on the age and sex of the child.

(The relatively large proportion of time teenage girls allocate for personal care activities, however, raises a question about the degree to which these activities are nondiscretionary versus leisure.) Since the allocation of discretionary time, or time in which the child can choose to engage in different activities, depends on a variety of other variables such as children's age and sex, and family characteristics such as maternal employment status, single vs. two-parent families, and parents' educational attainment, we will discuss discretionary time use in relation to these characteristics.

Differences between Boys' and Girls' Time Use

The estimates of time spent in the activities presented in Tables 13.3 and 13.4 show remarkably few differences between boys and girls. Relative to the number of age differences, sex differences are relatively few. The differences that do emerge suggest that involvement in some activities such as sports and housework are guided to a certain extent by sex role stereotypes. Girls spend more time than boys on weekdays and weekends doing household work, in personal care activities, and eating; and less time playing sports (also see Table 13.5). On weekdays girls spend more time than boys talking to family members.* On weekends, girls spend less time watching TV than boys. This finding is at odds with other studies revealing no major sex differences in TV viewing patterns (e.g., Medrich, et al., 1982; Peterson and Zill, 1980).* Despite this sex difference,...

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*This variable is not the total time spent in conversation with household members, only the mention of this activity as primary. Children spend considerably more time in household conversations when secondary activities are taken into account. Preliminary analyses show that children spend about an hour and a half talking to household members in conjunction with some other primary activity.

The analyses reported above include only primary activities, and the reliability of the sex differences may be slightly suspect. But analyses in a later section, devoted entirely to children's television watching, include both primary
Table 13.3
MEAN HOURS:MINUTES SPENT IN MAJOR ACTIVITIES
BY AGE AND SEX: WEEKDAYS

<table>
<thead>
<tr>
<th>Activity</th>
<th>Age 3-11 Boys</th>
<th>Age 3-11 Girls</th>
<th>Age 12-17 Boys</th>
<th>Age 12-17 Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Work</td>
<td>0:16</td>
<td>0:00</td>
<td>0:23</td>
<td>0:21</td>
</tr>
<tr>
<td>Household Work</td>
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<td>0:21</td>
<td>0:16</td>
<td>0:40</td>
</tr>
<tr>
<td>Personal Care</td>
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<tr>
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<td>1:18</td>
<td>1:13</td>
<td>1:05</td>
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<tr>
<td>Sleeping</td>
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<td>9:50</td>
<td>8:24</td>
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<tr>
<td>School</td>
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<td>4:19</td>
<td>5:14</td>
<td>5:42</td>
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<tr>
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<td>0:03</td>
<td>0:07</td>
</tr>
<tr>
<td>Visiting</td>
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<td>0:25</td>
</tr>
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<td>Sports</td>
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<td>Outdoors</td>
<td>0:10</td>
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<td>0:10</td>
</tr>
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<td>0:07</td>
<td>0:04</td>
</tr>
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<td>Art Activities</td>
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<td>0:06</td>
</tr>
<tr>
<td>Playing</td>
<td>2:17</td>
<td>1:55</td>
<td>0:37</td>
<td>0:13</td>
</tr>
<tr>
<td>TV</td>
<td>1:57</td>
<td>2:08</td>
<td>2:23</td>
<td>1:48</td>
</tr>
<tr>
<td>Reading</td>
<td>0:09</td>
<td>0:07</td>
<td>0:10</td>
<td>0:13</td>
</tr>
<tr>
<td>Household Conversations</td>
<td>0:10</td>
<td>0:11</td>
<td>0:21</td>
<td>0:30</td>
</tr>
<tr>
<td>Other Passive Leisure</td>
<td>0:09</td>
<td>0:14</td>
<td>0:21</td>
<td>0:14</td>
</tr>
<tr>
<td>NA</td>
<td>0:22</td>
<td>0:25</td>
<td>0:14</td>
<td>0:17</td>
</tr>
</tbody>
</table>

Percent of Time Accounted for by Above Activities: 93.9% 92.2% 93.1% 91.9%

Table 13.4
MEAN HOURS:MINUTES SPENT IN MAJOR ACTIVITIES
BY AGE AND SEX: WEEKENDS

<table>
<thead>
<tr>
<th>Activity</th>
<th>Age 3-11 Boys</th>
<th>Age 3-11 Girls</th>
<th>Age 12-17 Boys</th>
<th>Age 12-17 Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Work</td>
<td>0:07</td>
<td>0:04</td>
<td>0:56</td>
<td>0:25</td>
</tr>
<tr>
<td>Household Work</td>
<td>0:32</td>
<td>0:43</td>
<td>0:46</td>
<td>1:29</td>
</tr>
<tr>
<td>Personal Care</td>
<td>0:42</td>
<td>0:50</td>
<td>0:35</td>
<td>1:16</td>
</tr>
<tr>
<td>Eating</td>
<td>1:18</td>
<td>1:24</td>
<td>0:58</td>
<td>1:15</td>
</tr>
<tr>
<td>Sleeping</td>
<td>10:25</td>
<td>10:19</td>
<td>9:10</td>
<td>10:12</td>
</tr>
<tr>
<td>School</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Studying</td>
<td>0:04</td>
<td>0:09</td>
<td>0:25</td>
<td>0:25</td>
</tr>
<tr>
<td>Church</td>
<td>0:53</td>
<td>1:01</td>
<td>0:40</td>
<td>0:40</td>
</tr>
<tr>
<td>Visiting</td>
<td>0:23</td>
<td>0:37</td>
<td>0:46</td>
<td>0:53</td>
</tr>
<tr>
<td>Sports</td>
<td>0:33</td>
<td>0:23</td>
<td>1:05</td>
<td>0:26</td>
</tr>
<tr>
<td>Outdoors</td>
<td>0:30</td>
<td>0:23</td>
<td>0:36</td>
<td>0:19</td>
</tr>
<tr>
<td>Hobbies</td>
<td>0:03</td>
<td>0:04</td>
<td>0:04</td>
<td>0:07</td>
</tr>
<tr>
<td>Art Activities</td>
<td>0:04</td>
<td>0:04</td>
<td>0:11</td>
<td>0:09</td>
</tr>
<tr>
<td>Playing &amp; Games</td>
<td>2:57</td>
<td>2:46</td>
<td>0:35</td>
<td>0:24</td>
</tr>
<tr>
<td>TV</td>
<td>3:01</td>
<td>2:02</td>
<td>3:07</td>
<td>2:20</td>
</tr>
<tr>
<td>Reading</td>
<td>0:12</td>
<td>0:10</td>
<td>0:12</td>
<td>0:19</td>
</tr>
<tr>
<td>Household Conversations</td>
<td>0:14</td>
<td>0:09</td>
<td>0:24</td>
<td>0:30</td>
</tr>
<tr>
<td>Other Passive Leisure</td>
<td>0:16</td>
<td>0:17</td>
<td>0:43</td>
<td>0:33</td>
</tr>
<tr>
<td>NA</td>
<td>0:20</td>
<td>0:29</td>
<td>0:10</td>
<td>0:04</td>
</tr>
</tbody>
</table>

Percent of Time Accounted for by Above Activities: 92.7% 89.3% 88.4% 89.0%
however, it is important to note that TV watching is the major free-time activity for most children. Only playing sports and games come even close to consuming as much of children’s free time.

Age Differences

Table 13.5 presents the average time spent on the 18 major activities by each of five different age groups. Differences in time use among age groups follow a logical pattern. Older children spend more time on weekdays and weekends doing household work and market work, studying, visiting friends, watching television, and in other passive leisure activities like listening to records or to the radio. Older children spend less time eating, sleeping, "playing," and going to church. Their passive leisure activities in general appear more varied than those of younger children: e.g., they talk to friends, listen to music, and watch television. Younger children’s passive leisure activities consist primarily of watching television.

Age effects for most activities appear to be linear with the exception of television watching. Eleven and twelve year old children watch more television than children of any other age; 11 and 12 year olds watch television an average of 5 hours a week and secondary activities in analyses of age and sex differences in TV watching show similar results.

It is interesting to compare the amount of time junior and senior high school students in our sample report studying with the amount of time that same aged Japanese students spend studying. American students in our sample study about one half-hour a day, where Japanese students study between two and three and a half hours outside of school on a weekday (Nakanishi, 1982). The ratio of Japanese to American time spent studying is of the magnitude 10:1. These kinds of proportions make it easier to understand why American students’ standardized achievement scores compare so poorly with the scores of comparably aged students in other societies.
more than 13 to 17 year olds.' These findings replicate Lyle and Hoffman's (1972) and Peterson and Zill's (1980) findings that 11 and 12 year old children watch more television than children in other age groups."

The rather large amounts of time children spend watching television has long been a focus of developmental psychologists concerned about children's moral and cognitive development and the acquisition of aggressive behavioral styles.' This topic also caught the interest of the Surgeon General, whose concern focused on the socialization of a generation of young television viewers into responsible and productive adults. Given the importance attached to issues relating to children's television viewing behavior, we will discuss analyses predicting the amount of television watching among boys and girls as well as relationships between the allocation of time to television viewing and other activities.

The measure of time spent watching television employed in the following analyses is a reflection of the total amount of time children spend watching television. We combined the time spent watching TV in both primary and secondary activities, multiplied the aggregate school-day time estimate by 5.0 and the non-school day estimate by 2.0 to get an estimate of the total

"These analyses were performed using a synthetic variable that combined mentions of TV watching as primary and secondary activities.

The fact that 11 and 12 years old children spend so much time watching television may reflect television programming (i.e., the number of police dramas, the number of shows with male heroes or superheroes). This type of programming may be especially appealing to boys in this preadolescent period.

"Given the large differences observed between the time Japanese and American students spend studying, it is doubly interesting to compare the time each group spends watching television. There is very little difference between the two groups. American and Japanese children between 10 and 15 years both spend close to 2.5 hours on weekdays. On weekends Americans in our sample spend about 3 hours a day watching television and Japanese spend about 3.5 hours (Nakanishi, 1982a).

hours per week spent watching television. Boys, on average, spend 19.4 hours a week watching television, and girls watch TV 17.8 hours per week. Eleven and twelve year old boys, however, watch 26 hours of TV per week. As discussed earlier, this group watches more television than any other age group of boys or girls.

Aside from the age and sex of the child, certain family characteristics were found to be potent indicators of the amount of time children spend watching television. Foremost among them are patterns of family TV viewing patterns, such as how much television mothers and fathers watch, and whether the television is generally on whether or not people are actually watching it. Interestingly, the relationship between mothers' and children's television watching does not vary significantly by the sex of the child (Beta=.15, p<.01). But fathers' viewing seems to have a greater effect on their sons' viewing than on their daughters'. This finding speaks to the effects of mothers and fathers on the socialization of their children: sons more than daughters closely note and imitate their fathers' recreational behavior, while mothers have a less predictable yet similar effect on their sons and daughters. The mothers' educational attainment is also an important predictor of the amount of time children spend viewing (Beta=-.25, p<.001), other things equal.

One of the major arguments against children watching TV is that they could be spending their time doing more enriching activities. The question remains, however, as to whether the children would spend time in these activities if they were not watching television. To get a sense of the way in which the time use of children who do not watch a lot of television differs from heavy TV viewers, we regressed each activity on total TV viewing, age, and sex. Analyses revealed few differences between groups. TV viewing appears to displace time spent in personal care activities on weekends and during the week, and time spent in church on weekends, all other things equal. These findings suggest that heavy TV viewing does not necessarily reduce time
spent in developing cognitive skills, but that does not rule out
the possibility that something about TV watching itself may
inhibit the development of social or intellectual skills. In
fact, the more television 9 to 17 year old children watch during
the week, the lower are their scores on a standardized reading
comprehension measure (r = -.15, p < .05), excerpted from the Wide
Range Achievement Test. Closer inspection of the data showed
that high levels of weekend television viewing showed a much
stronger negative relationship to reading comprehension scores
(r = -.17, p < .01) than did weekday viewing (r = -.09, NS). These
results may reflect a differential impact of weekday and weekend
content (e.g., situation comedy vs. cartoons) on the development
of cognitive abilities.

Interactions Between Age and Sex

Interactions between age and sex are observed in household
work, personal care activities, sports and television viewing
(discussed above). Older girls spend more time in personal care
activities and household work than others, and older boys spend
more time in sports than others.

The significant interactions suggest that the sex
differences discussed earlier result from the rather large
differences between older adolescent boys' and girls' time use
rather than from differences between elementary school boys and
girls. The pattern of divergence in the time use of adolescent
boys and girls suggests increased conformity to sex-role
stereotypes. For example, in comparison to younger girls the
adolescent girls spend more time in household work, especially on
female-typed household tasks. In contrast, adolescent boys spend
more time in organized sports than the younger boys.

Other research suggests that through second grade,
children have limited and fragmented comprehension of television
content (Collins, 1979), therefore the analysis reported here was
limited to older children.

The development of self-concepts of ability and achievement
strivings shows a similar divergence between girls and boys
during adolescence. Boys and girls do not differ in their
ratings of their own abilities to do well in mathematics until
they reach high school. In high school, girls and boys perform
equally well in math—but girls become less convinced of their
own ability to do math, while boys' attitudes do not change.
What could cause this kind of effect? Meece et al. (1982)
proposed that an interaction between expectancies for success and
value of the activity determines whether or not an activity is
pursued, and further distinguished between the value of
performing the task (utility value) and the value of succeeding
at the task or the attainment value (see also Eccles, 1983).

The expectancy side of the model does not really seem to
help in explaining differences between adolescent boys and girls
in TV watching, personal care, or household work. The
differential utility and attainment values of the different
activities to boys and girls may prove useful for interpreting
differences in allocation of time that emerge at adolescence.
Girls for whom dating and popularity is important may spend more
time in personal care activities (making themselves attractive)
than boys in general and girls for whom these aspects of life are
less important. A similar effect may exist for involvement in
athletic activities.

Relationship between Mothers' Marital
Status and Children's Time Use

The kinds of activities engaged in by children may be
affected by the mothers' marital status because a family with one
parent is necessarily organized differently than a family with
two parents. In our sample, 85.7% of single mothers are
employed, while only 61.9% of married mothers are employed. Of
the employed mothers, single mothers work in the labor market an
average of eight hours a day, while married mothers work in the
labor market an average of just over 5 hours a day. A longer
work day is likely to mean that the mother would not be at home.
at times when school is not in session, so that alternative arrangements would have to be made. Children might have to spend more time at school, participating in extracurricular activities; younger children may go to nursery school instead of staying home; or arrangements could be made for children to play at a particular friend's house while their mother works. Single mothers may also need more help around the house than married mothers, and their children may be more likely to help them out.

Table 13.6 shows the average amount of time children of married and single mothers spend in major activities. Asterisks next to time estimates indicate that children of married and single mothers differ in the time allocated to that activity. An "A" or an "S" next to the time estimate indicates the presence of an interaction between mothers' marital status and the age or sex of the child. Possible interpretations of these interactions will be discussed in the text.

Table 13.6

<table>
<thead>
<tr>
<th>Activity</th>
<th>Weekday</th>
<th>Weekend</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mother Married</td>
<td>Mother Single</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N=346</td>
<td>N=43</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mother Married</td>
<td>Mother Single</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N=346</td>
<td>N=43</td>
<td></td>
</tr>
<tr>
<td>Market Work</td>
<td>0:13</td>
<td>0:16</td>
<td></td>
</tr>
<tr>
<td>Household Work</td>
<td>0:25</td>
<td>0:20</td>
<td>0:47*</td>
</tr>
<tr>
<td>Personal Care</td>
<td>0:49</td>
<td>0:47</td>
<td>0:49</td>
</tr>
<tr>
<td>Eating</td>
<td>1:14</td>
<td>1:15</td>
<td>1:14</td>
</tr>
<tr>
<td>Sleeping</td>
<td>9:14**A</td>
<td>7:57</td>
<td>10:06</td>
</tr>
<tr>
<td>School</td>
<td>5:00**A</td>
<td>6:02</td>
<td>9:55</td>
</tr>
<tr>
<td>Studying</td>
<td>0:21</td>
<td>0:34</td>
<td>0:12</td>
</tr>
<tr>
<td>Sports</td>
<td>0:26</td>
<td>0:40</td>
<td>0:35</td>
</tr>
<tr>
<td>Outdoor Activities</td>
<td>0:09</td>
<td>0:03</td>
<td>0:24</td>
</tr>
<tr>
<td>Hobbies</td>
<td>0:03</td>
<td>0:00</td>
<td>0:04</td>
</tr>
<tr>
<td>Art Activities</td>
<td>0:06</td>
<td>0:00</td>
<td>0:07</td>
</tr>
<tr>
<td>Playing</td>
<td>1:30*A</td>
<td>0:28</td>
<td>1:47</td>
</tr>
<tr>
<td>TV Viewing</td>
<td>2:02</td>
<td>2:05</td>
<td>2:31*</td>
</tr>
<tr>
<td>Reading</td>
<td>0:10</td>
<td>0:03</td>
<td>0:13</td>
</tr>
<tr>
<td>Being Read to</td>
<td>0:01</td>
<td>0:00</td>
<td>0:01</td>
</tr>
<tr>
<td>Other Passive</td>
<td>0:05</td>
<td>0:05</td>
<td>0:10</td>
</tr>
<tr>
<td>Leisure</td>
<td>0:16</td>
<td>0:47</td>
<td>0:16</td>
</tr>
</tbody>
</table>

- Difference by mother's marital status, controlling for sex and age of child, p<.05; **p<.001; *p<.10.
- A=Interaction between mothers' marital status and age of child, p<.05; A+, p<.10.

Children of single mothers are slightly more likely to help out with housework on weekends, controlling for the sex and age of the child. Children of single mothers sleep less than children with two parents, and that the differences between the two groups decline with age. Three to five year old children of single mothers sleep over two hours less per night than the same aged children whose mothers are married. There is no difference between the two groups of 12-14 or 15-17 year olds. The 3 to 5 year olds may sleep less because their mothers must get them to nursery school or daycare first thing in the morning before they go to work. In fact, 3 to 5 year old children of single mothers spend significantly more time in school than same aged children of married mothers (diff=239.3 minutes, p<.05). Six to twelve year old children of single mothers may take more responsibilities at younger ages (e.g., to take care of themselves, or to do household work without having to be told), and their mothers may reward them by allowing them the privilege of establishing their own bedtime.
of the child. The sex and age of the child, and the interaction of age and sex account for a fairly large proportion of the variance in the amount of household work performed by the child ($R^2 = .21$); mothers' marital status is a marginally significant predictor over and above these controls. There were no interactions between mothers' marital status and children's age or sex. The lack of any effect on weekdays and the marginal effect on weekends suggests that single mothers do not require their children to do much more work around the house than married mothers.

Children of single mothers watch an average of one hour more television on a weekend day than children with two parents. No interactions between mothers' marital status and age or sex of the child were evident. This result is interesting in light of the fact that single mothers watch more television than married mothers. As proposed earlier, single mothers may spend more time than others watching television with their children. Television is inexpensive entertainment and this may be an important consideration for mothers supporting a family on a single (and often low) income.

Maternal Employment Status and Children's Time Use

Just as the presence of only one parent in the household affects the structure of children's time use, maternal employment status may also affect the structure of children's time use. While mothers and fathers are at work, they must be assured of their children's safety. If the children are old enough, they may be allowed to stay home alone and watch television, or they may take part in extracurricular activities at school, or even attend art, dance or sports lessons at a local community center. On weekends, family time may also be more structured. Parents may want to spend that time doing things together, rather than allowing the child to spend time playing with friends away from home. In fact, older children (aged 14-17) are generally much more likely to say that their families seldom do things together.

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Table 13.7: MEAN NUMBER OF HOURS:MINUTES CHILDREN OF EMPLOYED AND HOMEMAKER MOTHERS SPEND IN MAJOR ACTIVITIES

<table>
<thead>
<tr>
<th>Activity</th>
<th>Weekday Mother Employed</th>
<th>Weekend Mother Employed</th>
<th>Weekday Mother Homemaker</th>
<th>Weekend Mother Homemaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Work</td>
<td>0:12</td>
<td>0:15</td>
<td>0:10</td>
<td>0:24</td>
</tr>
<tr>
<td>Household Work</td>
<td>0:25*</td>
<td>0:24</td>
<td>0:51</td>
<td>0:67</td>
</tr>
<tr>
<td>Personal Care</td>
<td>0:51</td>
<td>0:48</td>
<td>0:50</td>
<td>0:50</td>
</tr>
<tr>
<td>Eating</td>
<td>1:14</td>
<td>1:12</td>
<td>1:11</td>
<td>1:14</td>
</tr>
<tr>
<td>Sleeping</td>
<td>8:53*</td>
<td>9:30</td>
<td>10:02</td>
<td>10:03</td>
</tr>
<tr>
<td>School</td>
<td>5:00**A</td>
<td>4:03</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Studying</td>
<td>0:23</td>
<td>0:22</td>
<td>0:14</td>
<td>0:13</td>
</tr>
<tr>
<td>Sports</td>
<td>0:28</td>
<td>0:25</td>
<td>0:34</td>
<td>0:24</td>
</tr>
<tr>
<td>Outdoor Activities</td>
<td>0:08</td>
<td>0:10</td>
<td>0:24</td>
<td>0:28</td>
</tr>
<tr>
<td>Hobbies</td>
<td>0:04</td>
<td>0:02</td>
<td>0:02</td>
<td>0:05</td>
</tr>
<tr>
<td>Art Activities</td>
<td>0:06</td>
<td>0:06</td>
<td>0:04</td>
<td>0:10</td>
</tr>
<tr>
<td>TV Viewing</td>
<td>1:13</td>
<td>1:39</td>
<td>1:56</td>
<td>2:01</td>
</tr>
<tr>
<td>Reading</td>
<td>0:08</td>
<td>0:09</td>
<td>0:12</td>
<td>0:11</td>
</tr>
<tr>
<td>Being Read to</td>
<td>0:01</td>
<td>0:01</td>
<td>0:00</td>
<td>0:02</td>
</tr>
<tr>
<td>Other Passive</td>
<td>0:02</td>
<td>0:08</td>
<td>0:09</td>
<td>0:11</td>
</tr>
<tr>
<td>Leisure</td>
<td>0:25</td>
<td>0:11</td>
<td>0:21</td>
<td>0:09</td>
</tr>
</tbody>
</table>

*Difference by mothers' employment status, controlling for sex and age of child, p < .05; **p < .001.

\(A = \) Interaction between mothers' employment status and age of child, \(p < .05\); \(A = p < .10\).

Indicators of Socio-economic Status and Children's Time Use

Research has shown differences in the value parents attach to having children according to their socio-economic status (Rainwater, 1960; Hoffman, Thornton, & Manis, 1978), in day in school, while the same aged children of nonemployed mothers spend an average of just over an hour a day in school. These relationships reinforce our interpretation of relationships that appeared between mothers' marital status and the time 3 to 5 year olds spend sleeping and in school. Mothers are likely to use nursery school as a form of daycare for their 3 to 5 year olds, perhaps getting them up earlier and delivering them at school on their way to work.

Maternal employment status also has an impact on the amount of television children watch on weekdays; this relationship varies according to the child's age. Plotting the means for each group showed little change among different aged children of nonemployed mothers in amount of TV viewing. In contrast, as children of employed mothers increased in age, so did their TV viewing, peaking in the 10 to 12 year age group. An analysis of variance, testing for differences between children of employed and nonemployed mothers within age groups, showed significant differences between the two groups of children in the younger age groups (3-5 years, \(F = 8.5, p < .01\); 6-9 years, \(F = 4.69, p < .05\)) but no differences among older children. This difference in time use might be a result of differential after-school time use. Younger children of employed mothers may be more likely to spend their time at daycare centers or babysitters' houses, where they may not be as likely to watch TV as they are at home. A second hypothesis is that employed mothers of younger children, who provide much of the diary information, cannot know what their children are doing while they are at work—even if they know the child is home with older siblings, or at some other place—and therefore would not be as likely to mention that the child was watching TV during this time.
childrearing practices, and in the goals parents have for their children (Kohn, 1969; Rubin, 1976). For example, parents of middle class children advocate the importance of independent thinking, while working class parents emphasize obedience and conformity. Furthermore, working-class parents believe that limit-setting will aid in instilling these values. Middle-class parents emphasize emotional support and believe that limit setting inhibits the development of self directedness. The differences between child-rearing attitudes of working and middle class parents are geared to the kinds of values they have for their children; and the structure of their children's time use may vary accordingly.

Tables 13.8 and 13.9 describe the average time use of children, according to their parents' level of educational attainment. Notations in the effects columns indicate the strength of effects and the presence of interactions. We ran regressions to test the strength of main effects of educational attainment and interactions between attainment, age and sex of the child. The discussion of the results in Tables 13.8 and 13.9 will first focus on the similarity of the relationships between mothers' and fathers' education on children's time use. Following this, we will discuss the relationships that appear only for fathers or mothers.

Fathers' and mothers' educational attainment seems to relate similarly to the amount of time children spend on personal care, sleeping, studying, playing sports, watching television, reading and being read to. Children whose father and/or mother have at least a college degree spend more time than other children washing, dressing, doing homework, reading and being read to; and they spend less time watching television. As discussed earlier, fathers with at least a college degree spend less time than others watching television. Perhaps these parents set an example for their children, and the children model their parents' behavior. Alternatively, it could be that TV watching is a family activity in most households and if parents are watching
Additionally, other research has shown that middle-class parents, more than working-class parents, value independent thinking over conformity (Kohn, 1963). Perhaps a high value of reading and thinking accompanies parental encouragement of independence. So, the greater likelihood for children of higher educated parents to read and study more, and to watch TV less may result partly from children modeling parents' behavior and children responding to parental encouragement and values. It is not altogether clear why children from higher educated families spend more time on personal care. Earlier analyses of parents' time use and educational attainment suggest that more highly educated parents may do a wider variety of active and passive leisure activities. If children accompany their parents on these excursions, they may spend proportionally more time preparing to go. Another difficult relationship to interpret is that parents' educational attainment and the time children spend sleeping (partial r = .16), controlling for age and sex effects. There is no apparent structural reason for this relationship. For example, higher educated fathers are no more likely than less educated fathers to have employed wives. It is possible that our hypotheses about social class differences in parenting values may apply here. More highly educated parents may think it is important for their children to decide when to go to bed, while less educated parents feel they should exercise control over their children in this area. Consequently, children with higher educated parents may stay up later in the evening.

Activities that are significantly related to mothers' educational attainment but not fathers' are playing, and sports. The relationship between sports involvement and mothers' education varies according to age of the child on weekdays and by sex of the child on weekends. There is little difference in time spent in sports among children of mothers with high school or some college education. But the children of college-educated mothers (particularly boys) spend more time at sports than other children.
These relationships do not really fit any established theory about class differences, nor do they fit any of our own hypotheses. It is possible that these effects result from the strength of one or two outliers. Indeed, when the distribution of the time that children of college-educated mothers spend in sports on weekdays and weekend days are inspected, we find one outlier for weekend sports, and three for weekday sports. When these are eliminated, the interaction between age, sex, and mothers' educational attainment and time spent in sports disappears.

To sum up, parents' educational attainment does appear to have an effect on certain domains of children's time allocation, most consistently (and most interestingly, from a developmental point of view) in the realm of intellectual pursuits. We believe that parents' childrearing values and their goals for their children mediate the relationship between indicators of social class and time use.

Presence of Babies in the Household and Children's Use of Time

The presence of a baby in a household is closely tied to the family's life stage. To illustrate, 60% of families with no babies have children between the ages of 11 and 17 years, whereas 25% of families with a baby in the household also have 11 to 17 year old children. Conversely, 37% of families with a baby in the household also have 4-6 year olds, as opposed to 13% of families without babies. Given the normative stages of family life, the presence of a baby may have a very different effect on teenagers, for whom the presence of a baby may be nonnormative, than for young children. For this reason, and because we have already observed so many age difference in time use, we will look within age groups of children when investigating the impact of the presence of a baby on their time use. We will also stratify those families with babies by the mother's employment status. If a mother works outside the home, we might expect a greater burden of household work to fall on other children.

The results of the analyses of children's time use according to the presence or absence of babies in the household and mothers' employment status yielded unexpected results. Differences among the groups appeared only among 4 to 6 year olds. Children 11 to 17 years in families with a baby did not appear to take on any more responsibility for household production than other adolescents. There were three differentiating areas of time use for 4 to 6 year old children in families with and without a baby and employed mother. First, 4-6 year olds with younger siblings spend less time in school than 4 to 6 olds with no siblings 3 years or younger, all other things equal. Differences by maternal employment status did not reach statistical significance. Second, 4 to 6 year olds with younger siblings "play" more than 4 to 6 year olds with no younger children in the household. This effect may reflect differences in the time these children spend in school. But perhaps 4 to 6 year olds who have only older siblings "grow up" faster. Perhaps they model older brothers' and sisters' activities more, and perceive themselves as doing more grown up things. We do not know very much about the influence of siblings on behavior or self-perceptions. However, some research on birth-order effects on cognitive abilities suggest that the presence of babies in a household dilutes the family intellectual environment (Zajonc, 1976; Markus & Zajonc, 1977); perhaps one behavioral outgrowth of a diluted intellectual environment for 4 to 6 year olds is more time spent playing. Last is an interaction between presence of babies, mothers' employment status and the time children spend listening to someone else reading. Children 4 to 6 year old with younger siblings and employed mothers are read to more often than other 4 to 6 year olds. Although this finding is not entirely reliable because not that many children are read to at all, the data are provocative. If true, this finding suggests that reading to their children is one way in which employed parents compensate for one of them not being at home all the time, and feeling as though they are not greatly contributing to their children's cognitive growth and development.
This report has summarized the time use of parents and children as it varies by certain demographic variables such as mothers' marital status, mothers' employment status, and parents' educational attainment. We also described differences in children's time use by their age and sex.

Based on other studies we expected to find few effects of mothers' employment status on family members and indeed we found little evidence of substantial impact on the time use of husbands and children. Of course, a mother's participation in the labor force greatly changes her own time use.

Parents' education, used as an indicator of socio-economic status, bore little relationship to variations in parents' time use, with the exception of television viewing. Increased education related to reduced television viewing. Parents' education related to children's time use in several important ways. Higher educational attainment in parents related to more studying and reading, and less television watching in children. An interaction between the sex of the child, parents' education and involvement in sports suggested greater sex-role stereotyping in that domain in families with at least some college-educated parents than in families with high school-educated parents.

The results of our analyses for the number of babies in the household served mainly to validate the time diary method. Mothers with at least one baby work less outside the home, spending more time on child care and housework. Fathers spend slightly more time on child care when there are small children (or one small child) in the home.

Children show substantial differences in time allocation according to age, and show relatively fewer differences according to their sex. Some interactions between age and sex in time allocation showed a tendency for boys' and girls' time use to diverge with the onset of adolescence, and conform more to sex-role stereotypes.

Methodological issues in collecting time diary information were discussed. Available data suggest that children give as much detailed information as adults, they enjoy talking about themselves to interviewers, and time estimates seem to match frequencies documented in previous research. Alternative methods were suggested for increasing reports of certain types of low frequency data.
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