

# **Twenty-Four Hours**

*Insights into the Flow of Daily Life  
from the American Time Use Survey*

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## I. Introduction: Time Use Research

Time and money are the two most important quantifiable resources in life. And they are also perhaps the most important constraints.

This is a report about time, in particular how American adults spend their day. It showcases a unique new survey resource that allows questions – important and frivolous alike – to be answered that previously could only be speculated upon.

There are many ways to describe how people use time. The unlikely inspiration for the approach followed here is a book for prospective parents titled *The First Twelve Months*. Back when I read it, the month-by-month chapter flow of the book made the many developmental facts about a child's first year of life much more sensible and relevant than if the organization had been around, say, health and socialization issues. This chronological approach provided a useful road map.

Similarly, this report uses chronology to organize the discussion of time use. People are followed through the day, from the earliest wake up hour all the way through the dead of night. The chapters describe general time-use patterns and also offer special stories and anecdotes. Offered here is an overview of the day, and how it differs by personal characteristics, day of week, and time of year.

The analysis showcases the American Time Use Survey (ATUS), the most powerful resource ever for the study of how adults spend time. Although data from the first ATUS have been available only since 2004, the strength of the data and the research opportunities it presents has inspired researchers in academia to undertake many investigations. In addition, the Bureau of Labor Statistics (BLS) of the U.S. Department of Labor, sponsors and producers of the ATUS, have provided many tables and charts summarizing the data

Ever wonder what all those people who are not at work on weekdays are doing? Or who is awake at 3 AM? Or whether people save up their household chores for the weekend?

Well, I do wonder about these things. The American Time Use Survey has given me the opportunity to satisfy my curiosity about how others use time. In doing so, I hope to have unearthed some findings that others will find interesting and fun.

-- *What Is New Here?*

Despite all the data and studies of time use with the ATUS, there has been no broad overview designed for a general audience. This report provides that overview and is intended to complement the more technical and focused studies from academic researchers and the sets of summary tables and charts made

available by BLS. The material is broad in scope, straightforward in presentation, and, I hope, entertaining and illuminating in content. This report is one that people can read beginning to end or jump into at any point or topic that interests them.

The innovation of this study is its combination of features: The approach is chronological through the day. The sample of adults is large, current, and nationally representative. The activities are detailed. Information is provided not just on “what,” but also on when, where, and with whom. The presentation is non-technical and highly graphical, but also intended to meet the technical standards of statisticians and social science professionals.

The time use diary approach to data collection in the ATUS makes it easy to follow respondents through the day. Every start and stop time is recorded for every activity during the day. The typical respondent in the sample used here reports 19 distinct activities during the 24-hour diary day. As discussed in the appendix, the time use diary method has been found to be more accurate than alternatives for collecting time use information. The narrative in this study mimics the diary approach in following respondents through the day.

The ATUS sample is large and representative of US adults. Most other time use surveys have focused on segments of the population or have been small in sample size, limiting the conclusions that could be drawn. The ATUS, with 48 thousand adult respondents reporting 955 thousand distinct activities over the 2003-05 period covered here, can provide national counts and distributions as well as estimates for population subgroups defined by personal characteristics, day of week, season of the year, and location.

The ATUS defines “adult” as anyone age 15 or over. Most of the tabulations in this report use the full sample, although for some purposes we exclude the high school age group 15-17 years old ( 6 percent of the all respondents) or the larger group of young adults age 15-20 ( 11 percent of all respondents).

The large sample of respondents allows estimation for detailed activities. The ATUS has 511 distinct activity codes, and the sample size permits stable estimates to be generated for many of these.

In addition to detailed descriptions of the activities, the ATUS provides information on where those activities took place, and who was present with the respondent at the time of the activity. These variables vastly expand the range of questions that can be addressed with the ATUS.

As for presentation, the approach here is informal. The goal is both to inform and to entertain. Graphs are favored over tables. Formal footnotes are eschewed. Most of the text is descriptive, without much theorizing or hypothesis testing, although some speculations are offered. Other studies have focused on

differences in time use by demographics – age, sex, income, race, ethnicity, and family status. We examine those differences as well, although we organize around activities and hour of the day, rather than the demographic traits themselves. I don't spend a lot of time comparing results here to other studies, in part because I try to do things others have not.

But the investigation is intended to withstand professional scrutiny for accuracy. I don't discuss sampling errors, but I try to avoid presenting conclusions that depend on differences that may not be statistically significant. The aggregation of data from the 2003, 2004, and 2005 surveys – designed to boost the sample size – is unlikely to distort the analysis because trends in time use are very gradual. 2005 is unlikely to be much different from 2003 in broad patterns of time use. Unless otherwise stated, all of the estimates and exhibits in this report are based on the combined ATUS samples of 2003, 2004, and 2005.

*-- Looking Ahead*

Some of the ways people use time will come as surprises, others will not. And what is surprising to one reader may not be to another.

One conclusion drawn from the tabulations is that just about everyone qualifies as a rare bird in some aspect of how they spend their time. There are many different ways to get through the day, accomplishing tasks and enjoying pleasures.

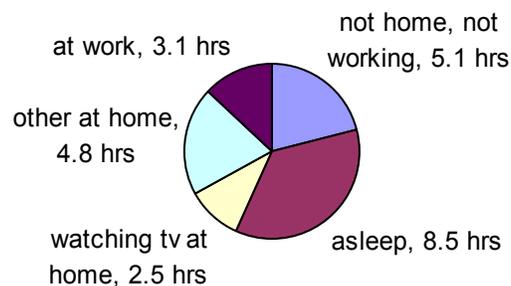
The next chapter provides an overview of time use and some more background on the American Time Use Survey. Following that comes a set of chapters that move through the day, from the earliest wake-up hour until bed-time for night owls. Then there are investigations of special topics, looking in more detail at how time use differs by day of week and season of year, and at how and when people travel. The final chapter wraps things up, to the extent that is possible.

## II. Overview – The Day Summarized

Sleep, work, and watch TV. Those three activities, for better or worse, account for 60 percent of the typical 24 hours of U.S. adults. Of waking hours, fully 38 percent are spent either working for pay or watching TV. More than one-third of the waking time at home is spent in front of the TV. Similarly, while work is the single most time-consuming activity away from home, non-work activities away from home take more time in total.

As the first exhibit in this study, the pie chart below needs some interpretation. It is an average time allocation across all adults, all days of the week, and all months of the year. In this sense, it is the “typical” person on the typical day. But typical people and typical days do not exist, and that is why the chapters that follow slice the data more finely.

**The Typical 24 Hours of U.S. Adults, 2003-2005**



Next, let's take a closer look at the waking hours. The table below ranks the top activities, by detailed definitions. They are an intuitively plausible assortment of work, play, and personal care activities. But note that a third of all waking hours are spent doing something other than one of these eleven top time takers.

<b>Percent of Waking Hours</b>	
<i>daily average for all adults, 2003-2005</i>	
21.0%	working at main job
16.8%	tv and movies
7.1%	eating and drinking
4.3%	washing, dressing, grooming oneself
4.3%	socializing/communicating with others
2.5%	food and drink preparation
2.4%	reading for personal interest
2.4%	interior cleaning
2.0%	relaxing, thinking
1.8%	commuting to/from work
1.8%	shopping, exc. groceries & gas
33.6%	all other activities
<b>100.0%</b>	<b>TOTAL WAKING HOURS</b>

Included among these others are some interesting, but infrequently reported, activities. One example is “sleeplessness,” which is reported separately from “sleeping.” In addition to the average 8.5 hours reported for sleeping, on average 3 minutes of “sleeplessness” is reported. (Among the 3 percent of respondents reporting any sleeplessness, the average was 80 minutes.)

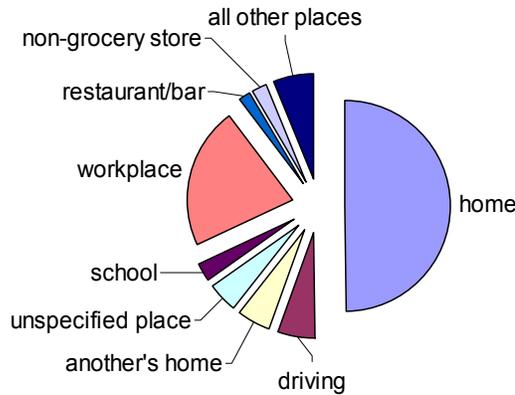
Another infrequently reported activity measured in the ATUS is viewing of religious TV shows. While included with non-religious TV programs in the pie chart TV total, religious shows are recorded separately, but are rarely reported and account for only 0.2 minutes of the average 155 minutes of daily TV viewing. While 80 percent of adults report watching some TV on the survey day, only 0.2 percent report watching any religious TV. (More on TV later.)

Lastly, the “working at main job” number in the table does not include lunch breaks, commuting, or second jobs. Each of those is recorded separately, and we will turn to them later.

In addition to reporting what they were doing, the ATUS respondents also describe where they were at the time and with whom. These are key features of the ATUS that we use throughout. The first example is in pie chart on the previous page, which combines the what with the where.

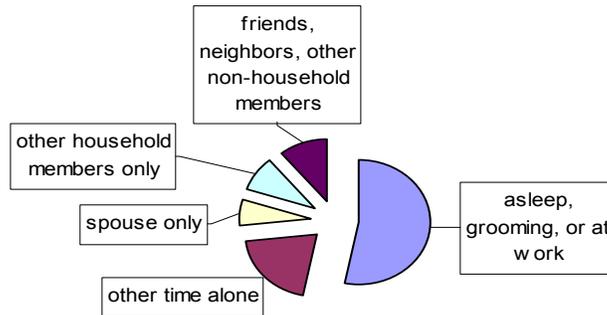
More detail on where people spend time is shown below. Home is where half of all waking hours are spent, and the place of work accounts for nearly one-quarter. Other places have much smaller shares of the total, but it is noteworthy that being behind the wheel of a car is, after home and the workplace, the third most common location. For reasons of privacy, the “where” question is not asked if the activity is sleeping, grooming, or unspecified personal/private activities. The pie chart assumes that these activities occur at home.

### Share of Waking Hours, by Location



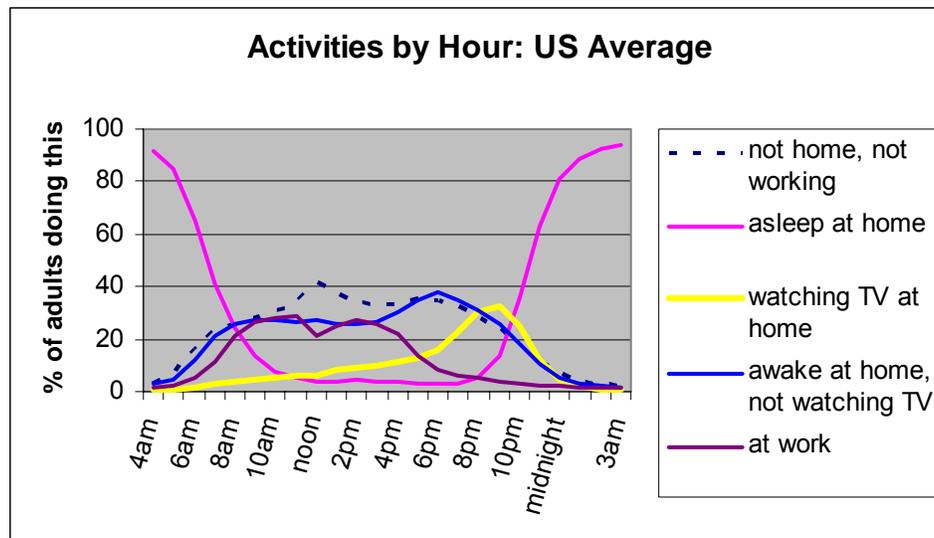
Some of the day is spent alone, and some is spent with others. For most activities, the ATUS asks “Who was in the room with you / Who accompanied you?” The “with whom” question is not asked if the reported activity is sleeping, grooming, or working, for reasons of privacy and because of the ambiguity of responses. Of the nearly half of the day not spent sleeping, grooming, or working, the typical adult spends most of it accompanied by at least one other person – usually a member of the household.

### Alone or Accompanied, Over 24 Hours



Again, these pie chart summaries are for the typical person on a typical day. Typical people and typical days do not exist, so only so much can be learned from these. These summaries are noteworthy as much for what they hide as for what they show. Time use depends on many variables, including personal characteristics and day of the week. Subsequent chapters investigate those. Another variable influencing time use – hour of the day – is the focus of the chapters that follow and is summarized in the chart below.

Depending on the time of day, every one of the broad activities from the pie chart at the beginning of this chapter is the most prevalent activity. No surprise that the overnight hours are dominated by sleep, with the proportion of adults asleep peaking at 94 percent between 3 AM and 4 AM. But only 24 percent are still asleep at 8 AM, and at that hour three other activity groups – not home, not working; awake at home not watching TV; and at work – account for similar shares of adults. Each of these three activities engage over 20 percent of adults until 4 PM, when work first tapers off, while non-work activities away from home and non-TV at home continue strong into the evening. TV viewing rules the 8 PM-10 PM time slot, but after 10 PM TV and other activities quickly give way to sleep. By midnight on a typical day, 81 percent of adults are asleep on a typical day.



Some activities are uncommon, but if done at all they take a long time. The average time spent by adults on an activity is the product of the percent of adults engaging in the activity and the average amount of time spent by those who engage in the activity at all. Sleep, work, and TV are common activities that also take much time by those who engage in them, but other less common activities also are time-consuming, as shown in the rankings in the table below. Hunting, for example, takes a lot of the time of those few respondents who go hunting on the survey day. Golfing, outdoor home repairs, and going to baseball games also take a lot of time.

<b>Activities Taking the Most Time, if Done at All</b>		
<u>Activity</u>	<u>Average Minutes Spent by Those Engaging in Activity</u>	<u>Percent of Adults Who Engage in Activity</u>
1 sleep	513	99.9
2 work at first job	450	43.2
3 taking classes in degree programs	316	5.0
4 hunting	265	0.3
5 fishing	250	0.6
6 work at second job	218	2.4
7 boating	208	0.2
8 golfing	197	0.7
9 watching tv	195	79.6
10 attending gambling establishments	193	0.5
11 attending/hosting parties	191	2.5
12 exterior home repair and improvements	183	1.2
13 attending baseball games	177	0.2

note: rankings limited to activities with more than 0.1 % participation by adults

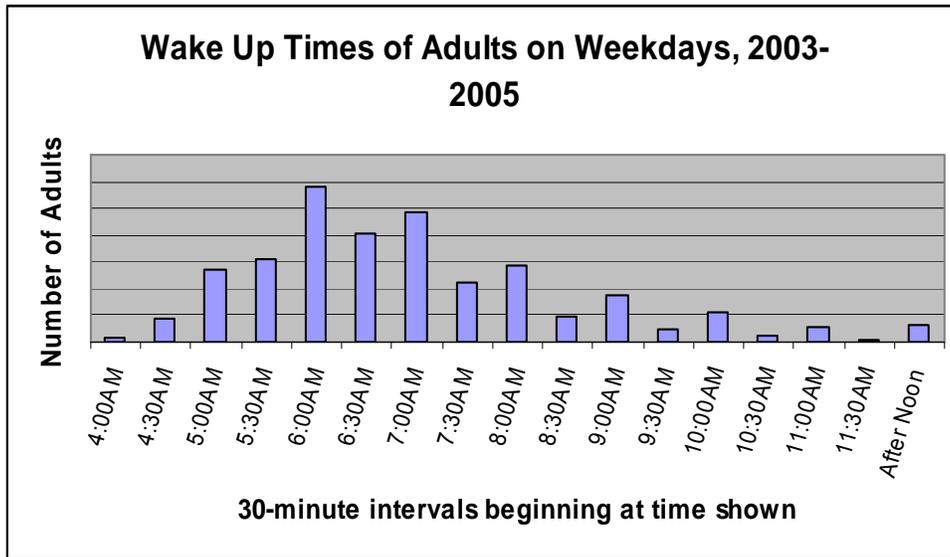
Multitasking – doing more than one thing at a time – is commonplace. People read while they are on the bus, listen to the radio while doing the dishes, and watch TV while having dinner or doing homework from school or the office. Emphasis in the ATUS is on the primary activity one is engaging in at a time. The one exception to the restriction to primary activities is in the handling of childcare. After the time diary is completed, interviewers ask respondents to identify the activities and times when a child under 13 years old was in the respondent’s care (other than already mentioned primary childcare activities). The emphasis on primary activities “...could lead to underestimates of the amount of time people spend doing activities that are frequently done in combination with other activities. For example, ATUS estimates likely underestimate the amount of time people spend listening to music since so many people listen to music while doing other things.

With this overview complete, we now begin a closer look at how people spend the day, from wake up until lights out.

### III. The Waking Hour

Time use on weekdays differs enough from weekends that we look at weekends separately. In this and the next several chapters, the focus is on weekdays – Mondays through Fridays. Weekends are highlighted in Chapter XI.

The proportion of people asleep peaks at 94 percent on weekdays and holds there between 3 and 4 AM. But beginning at 4 AM, the proportion asleep falls steadily. Half of all adults are awake by 6:30 AM. As shown in this chart, the most common 30-minute period for wakeups is 6:00 AM to 6:30 AM.



#### **Who Is Awake at 4 AM?**

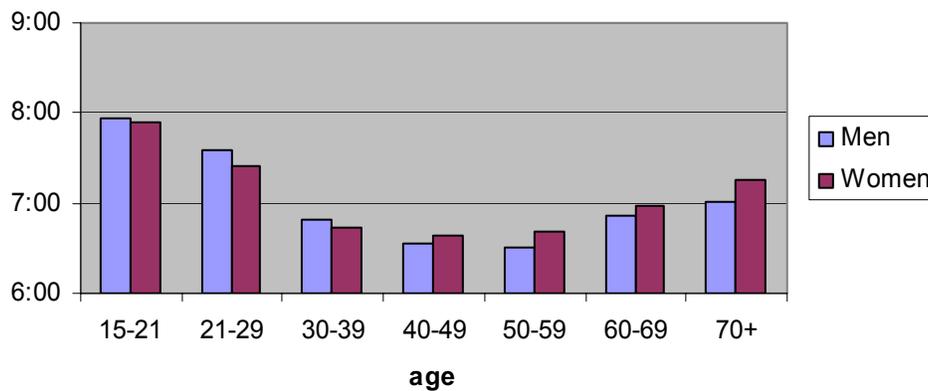
*While 91 percent of all adults are asleep at 4 AM on weekdays, that leaves several million who report being awake. About a quarter of these nocturnal folks are at work, and about 20 percent are washing or grooming, perhaps at the start of their day. The others who are awake at 4 AM report a wide variety of activities.*

*Men are more likely to be awake at 4 AM than are women – 10 percent compared to 7 percent. The average age of those awake and asleep at 4 AM is just about the same.*

*While some people are awake at 4 AM, almost everyone gets some sleep during the 24-hour survey day. Only 67 of the 47,731 respondents report that they were awake throughout the 24 hours.*

Age matters more than sex when it comes to wakeup times. Middle age adults wake up more than an hour earlier than young adults on weekdays, and at least a half hour earlier on average than seniors. Young men sleep in slightly later than young women, but this difference by sex is reversed at older ages.

**Weekday Morning Average Wakeup Times**



*-- Daylight Savings Time and Sleeping In*

Once a year we get an extra hour of sleep when the clocks are turned back. Or do we? “Fall back and spring forward” is the verbal clue many of us use to remember which way to adjust the dial. Do people in fact use the found hour to sleep in that Sunday morning in the fall? And do we lose an hour of sleep when clocks move forward in the spring?

It looks as if people are quick to grab the full extra hour of sleep in the fall, but in the spring they take 10-to-20 minutes of adjustment sleep time. The average wake up time on Sundays in the fall is 8:00 AM even the morning when clocks have been set back, implying that the typical adult uses the full extra hour to sleep in. But in the spring wake times are later the Sunday morning when clocks have been set forward, implying that adults’ wake up times don’t spring forward as much as the clock does. Because the number of survey interviews on any one day is small (approximately 200 for each of the Sundays shown in the table), the sampling errors in these estimates may be substantial, but the results are intuitively plausible.

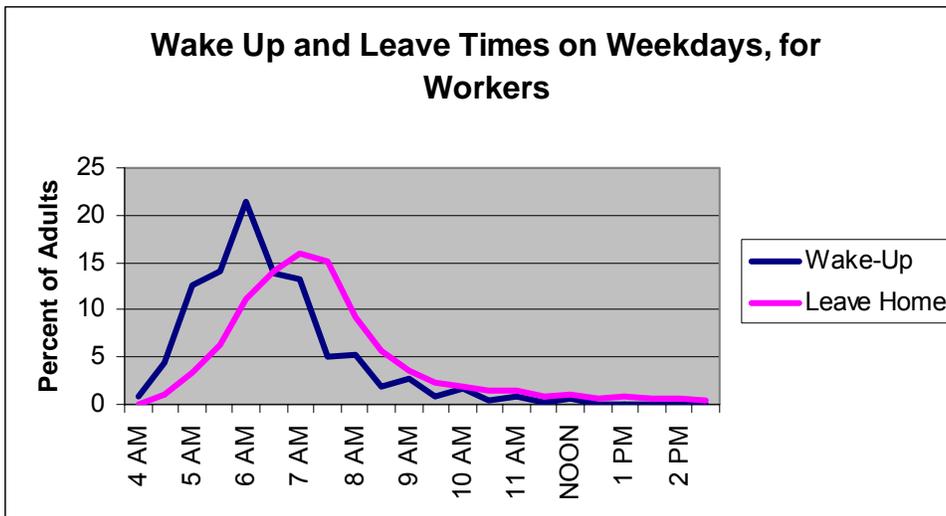
## Wake Up Times and Daylight Savings

*Most "fall back" but fewer "spring forward"*

	<u>mean</u>	<u>median</u>
<u>Sundays in Fall Relative to First Day of Standard Time</u>		
one week before	8:00am	7:50am
first day of	8:00am	7:50am
one week after	7:58am	8:00am
<u>Sundays in Spring Relative to First Day of Daylight Savings Time</u>		
one week before	7:51am	7:40am
first day of	8:07am	8:00am
one week after	7:54am	7:50am

### -- The Weekday Morning Routine

On workdays, the typical worker wakes up at 6 AM and heads out the door at 7:20 AM. Personal grooming (average of 35 minutes), breakfast (25 minutes), and child care (26 minutes if any) are the main activities before the workers leave home.

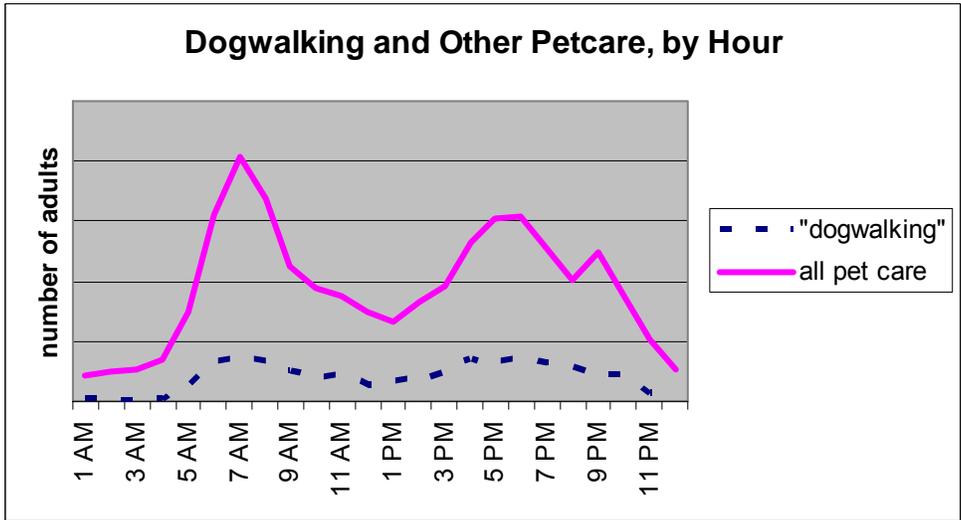


Women spend more time getting themselves ready in the morning than do men. 63 percent of women report time spent grooming prior to 10 AM on weekdays, compared to only 58 percent of men. And of those reporting any grooming, women spend an average of 39 minutes, compared to only 30 minutes for men.

-- When Do People Walk Their Dogs?

Approximately 39 percent of all U.S. households have at least one dog, according to the Humane Society. That figure almost matches the 41 percent of U.S. households that include children, according to the Census Bureau.

Pet care is part of the morning routine for dog owners and owners of other pets too. The reports of dog walking peak around 7 AM, with a secondary peak in the late afternoon and early evening. (Well, actually there is no activity labeled “dog walking” but I approximate it here by the activity “taking care of a household pet” if the specified place for the activity is away from home. People don’t usually walk cats or gerbils off-site.) People take their time in making the rounds with their dogs. The average length of “dog walking” is 31 minutes, compared to 21 minutes for all other reports of pet care. The length of episodes during the morning peak is about the same as during the late afternoon peak.



#### IV. Off to Work, School, or Wherever

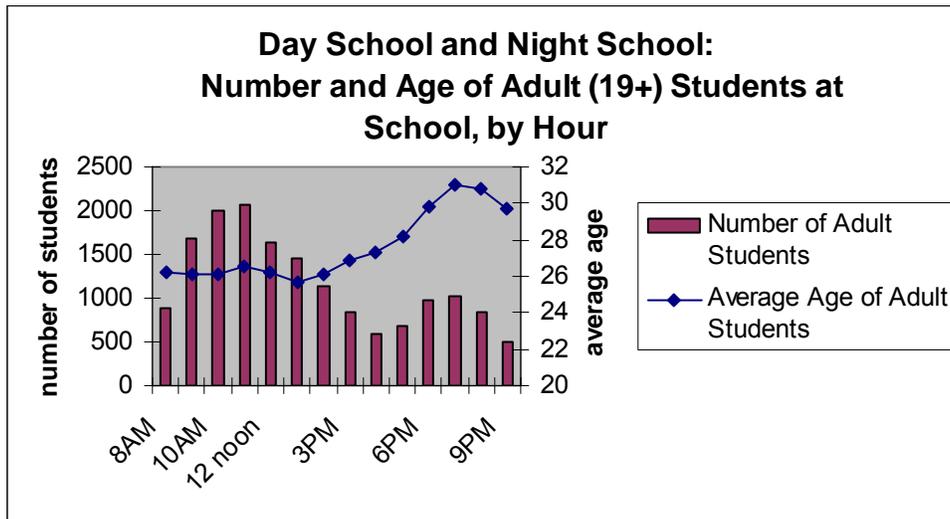
When people first leave home on weekdays, where do they go? Not surprisingly, the first stop for most is an automobile. 69 percent of all adults leaving their home on weekdays hop behind the driver’s seat, and another 12 percent are passengers. 6 percent report walking away from the home, and 5 percent say they were just “outdoors away from home.”

Those driving or riding in a car on these first trips out report a median drive time of 15 minutes, with a quarter of these morning travelers spending more than 25 minutes in the car.

What are the destinations of those venturing out on weekdays? The workplace, first and foremost. It is the destination reported by 34 percent of adults. Eleven percent go to a store to shop, and 10 percent report school as the destination. Someone else’s home is the first destination for 8 percent of adults who leave their own home, and the remaining 27 percent give a wide variety of other destinations.

School is, not surprisingly, the most common destination for teenagers leaving their home on weekday mornings. Among those of high school age (15-18), 47 percent report heading off to school on a typical weekday, even averaging in the summer months and other school holidays.

In the realm of adult education, the demographics of the student body depend on the time of day. Among students of college age or order (19+), “day” students – those at school during the morning and afternoon – are considerably younger on average than are “night school” students, many of whom are in the workaday world and are pursuing a degree or technical training at night.



### **Home Alone**

*The vast majority (93 percent) of adults leave the home during the day. But that leaves 7 percent who never venture out during the survey day. Compared to those who head out at least once, these shut-ins are older (average age of 53 compared to 43). Among those 55+, fully 19 percent do not venture out. Women are more likely to stay home all day than are men (13 percent versus 9 percent). Among all age/sex groups, older women are the least likely to venture out, with 21 percent staying home all day.*

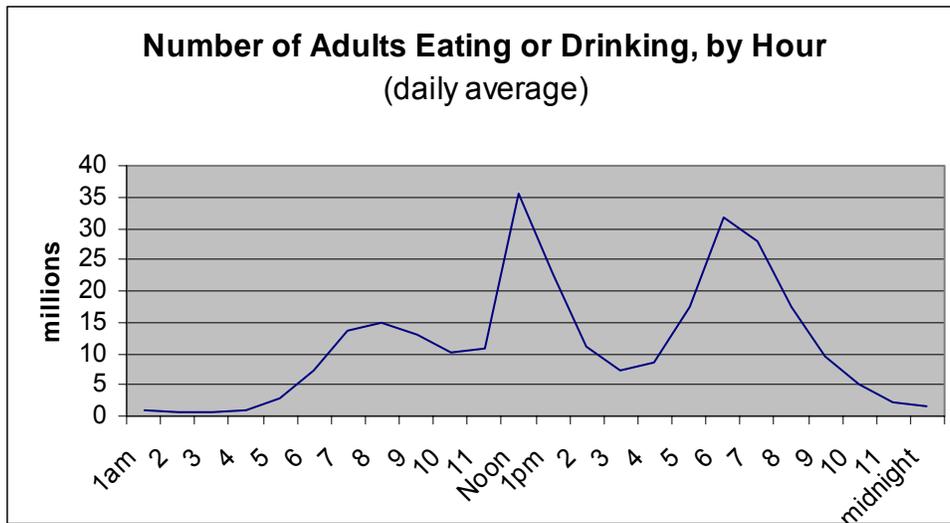
*Some – 19 percent -- of those who stay home all day do so alone. These loosely labeled ‘recluses’ constitute 2 percent of the population. They are disproportionately elderly women. Although only 15 percent of all adults, women age 55+ account for 41 percent of all recluses.*

## V. Doing Lunch

Of those at work on weekday mornings, a 30 minute lunch break is standard, and there isn't a whole lot of variation, with fewer than 10 percent reporting breaks of either less than 15 minutes or more than an hour. (Lunch at work is defined here as "eating or drinking" that begins between 11 AM and 2 PM and is immediately preceded by the respondent being at his or her place of work.)

"Doing lunch" isn't done very often, according to these respondents. Most (78 percent) workers report staying at the workplace for lunch, and only 14 percent go to a restaurant or bar.

More generally, lunch times are more concentrated around noon than are either breakfasts or dinners.



Just over half (51 percent) of workers have lunch with co-workers, 37 percent eat alone, and 8 percent report having workday lunch with a friend or a spouse. Men are slightly more likely to have lunch alone on workdays than are women – 39 percent to 34 percent.

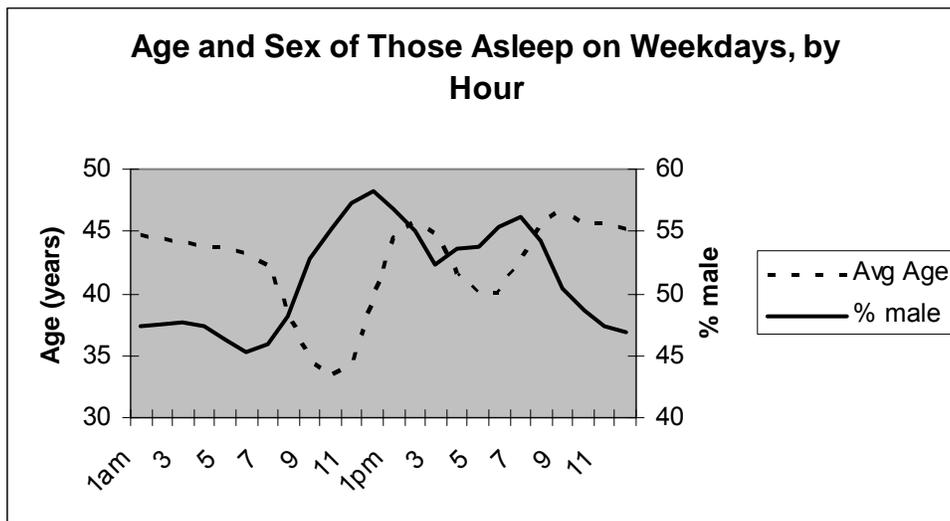
A lot of people skip breakfast, according to respondents' reports. 38 percent of adults report that their first "eating or drinking" of the day occurs at noon or after. But snacking is common as well, with 6 percent of respondents reporting four or more separate eating or drinking activities during the day.

## VI. Afternoon Doldrums

After lunch comes a period of reduced productivity for many, both at the workplace and at home. As Ackerman puts it, mid-afternoon is for many "...a dip in the day when the fog of fatigue drifts in to cloud thinking and numb limbs" (p.73).

The proportion of adults who are asleep is slightly higher in the afternoon hours than at mid-day or early evening. Fully 7 percent of all respondents report taking an afternoon nap on the survey day, with a nap defined as an episode of sleeping beginning between 12 noon and 5 PM and lasting less than 3 hours. Naps are only slightly less common on weekdays than on weekends. Of those reporting a nap, the average time asleep is 82 minutes, so very brief 'catnaps' seem to be the exception rather than the rule.

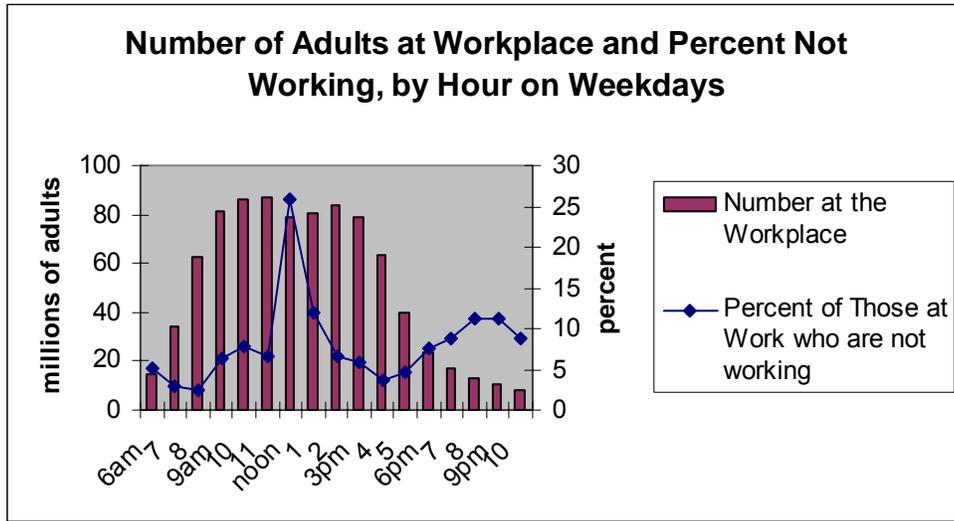
Naps are sometimes associated with older adults, and the statistics seem to bear that out. As shown in this chart, the average age of adults asleep on weekdays jumps from 35 to 45 between 11 AM and 2 PM. And men seem more fond than women of naps: The percentage male among those asleep rises from 46 percent in the early morning to 57 percent in the early afternoon.



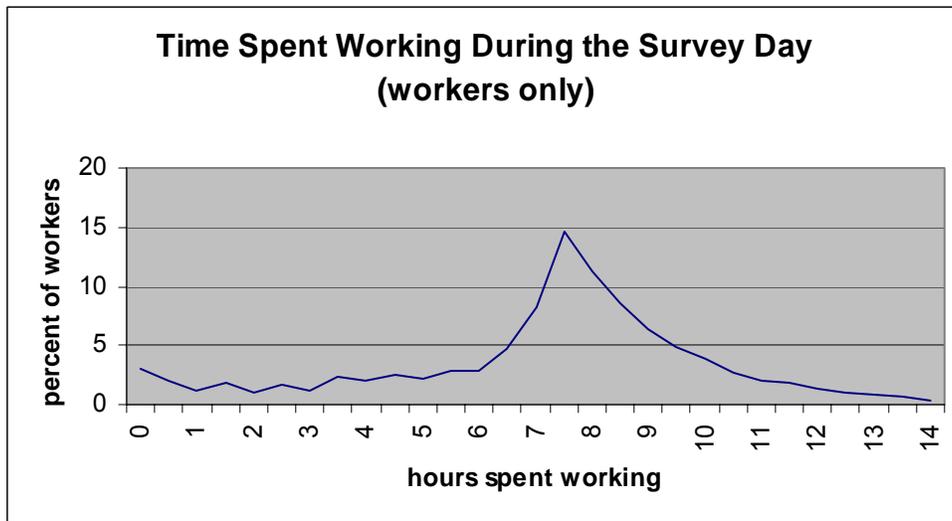
But despite the doldrums, people spend much more time at work after noon than before. Only 35 percent of all weekday hours spent working at a primary or second job come before noon; the other 65 percent are in the afternoon or at night.

It should come as no surprise that workers are not working every minute that they are at the workplace. More surprising is the apparent candor with which this fact is reported, as shown below. For most hours of the day, at least 5 percent of those at work report doing something other than working. The percentage peaks

at noon, when 26 percent say they are at work but not working. Most of those at-work-but-not-working say they are eating or relaxing, presumably while on break.



Even with these breaks, the eight-hour day lives. The median length of time spent working by those reporting any work on the survey day is exactly 8 hours; the average time is very close, at 7 hours, 52 minutes. The chart below shows there are also many who work either short hours or a very long day.



-- *First Jobs and Second Jobs*

44 percent of all adults report doing some work on the survey day. Among those reporting about a weekday, the figure is considerably higher -- 53 percent. Most of these are reporting on their main job, but in addition to the 42 percent who

spent time at their main job on the survey day, another 1 percent reported working at their second job, and 2 percent reported working both jobs.

Second jobs have the image of being part-time positions worked at night or on weekends, and the statistics bear this out. Unlike working at first jobs, which is much more likely to occur on weekdays than weekends, second jobs are about equally likely to be worked on all days of the week, as shown below

<b>Percent of Adults Reporting Working at First and Second Jobs, by Day of Week</b>		
<u>Survey Day of Week</u>	<u>First Job</u>	<u>Second Job</u>
Monday-Friday	53%	2%
Saturday/Sunday	20%	2%

As expected, much more time is spent on first jobs than on second jobs. Of those reporting any time spent at the main job on the survey day, the average time spent working that job was 7.5 hours, more than twice the average 3.6 hours reported by those spending time on their second job.

And lastly, second jobs do indeed start later in the day, on average. The mean start time for reports of working a first job is 11:54 AM, and for second jobs 2:22 PM. (For first jobs especially, this time may seem late, but it averages in afternoon episodes of work that begin after a lunch break.)

*-- Waiting and Wasting Time*

“Wasting time” is tough to quantify, but most would agree that “waiting” for someone or something is often a waste of time, and many times quite aggravating as well. The ATUS includes no fewer than 51 distinct activity codes for “waiting.” About 9 percent of all respondents reported spending time “waiting” during the survey day. For these adults, the average time spent waiting during the 24 hours is 42 minutes. The most often mentioned, and most time consuming, categories are “waiting for/with household children,” “waiting associated with medical service” (duh), and “waiting associated with helping household adults.”

## V. Heading Home

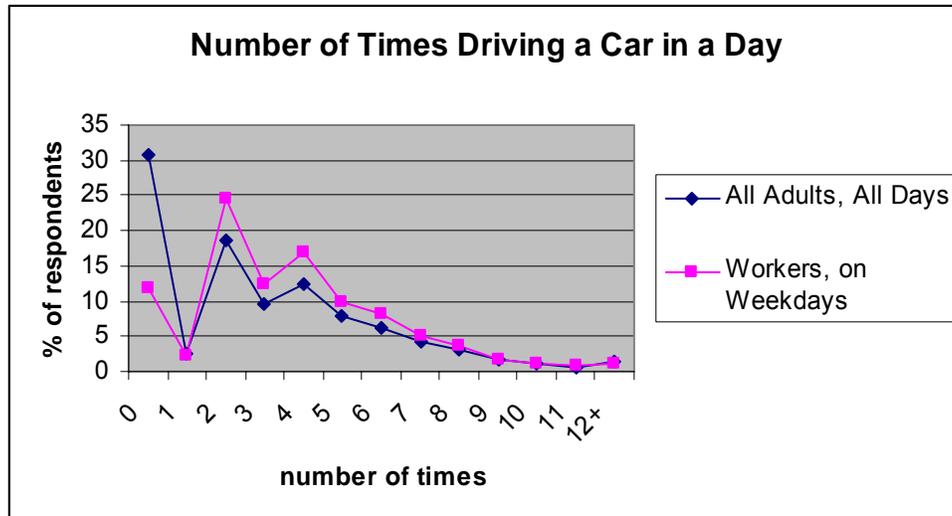
Most workers head directly home at the end of the work day (Exhibit). But about 40 percent stop somewhere else when they first leave their place of work by car in the afternoon. An unspecified “other place” is the most common, but shopping is also reported frequently. Someone else’s house also is a mentioned destination, as are schools, either to pick up kids or to attend class oneself. Not too many venture off to happy hours, as the percentage stopping first at a bar or restaurant is only 3%

### **First Destinations of Workers Leaving the Workplace by Car between 3 PM and 6 PM on Weekdays**

1. home 60%
2. unspecified other place 10%
3. store/mall other than grocery 6%
4. someone else’s home 5%
5. grocery store 4%
6. school 3%
7. restaurant or bar 3%
- all other destinations: 8%

Maybe it is just end-of-day fatigue, but afternoon commutes often seem longer than the trip from home to work in the morning. There is in fact a difference, but it is not large. For those driving from their home to their place of work on weekday mornings, the average time behind the wheel is 23 minutes. For those driving from work to home in the afternoon or evening, the average time is 25 minutes. Nor does the variability of commute times differ much between morning and afternoon – it seems both commutes are equally prone to accident-related delays and other wild cards.

Because of round-trips to the workplace, store, and other destinations away from home, it is not surprising that most respondents who report any car driving on the interview date report driving an even number of times, as shown in the chart below. In fact, it is hard to figure out how all the odd-numbered driving episodes could occur. Some undoubtedly are drop-offs or pick-ups (but not both) of school children or commuting spouses, but the number of respondents reporting driving three, five, or seven times in the day still seems high.



*-- Eight Hours Work Equals Eleven Hours Away*

I mentioned earlier that the 8-hour work day is very much the norm. But those eight hours of work translate into a much longer time away from home, once commuting and stops along the way are factored in. Of those working between 7 and 9 hours on weekdays, the average time working is exactly 8 hours, but the average time between leaving home in the morning and returning in the evening for this group is a much longer 11 hours and 18 minutes.

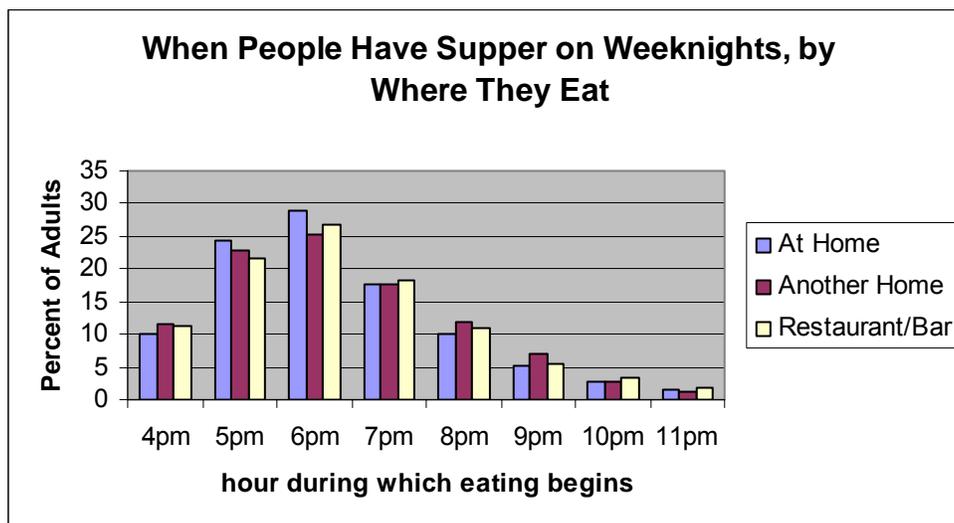
## VIII. The Supper Hour

Is it supper, or is it dinner? Whatever, it is the meal in the evening, and a time when those living with family reconvene at the end of the day. As shown below, dinner time varies a lot. Defining dinner time as the time at which an individual reports beginning to eat or drink, restricted to activities beginning between 5 PM and 9 PM, the average time is 6:33 PM. This definition probably includes eating & drinking activities other than the evening meal, but most are likely supper as we know it.

The caricature of the early bird specials at restaurants catering to seniors finds some support in the numbers, because older adults do eat dinner earlier than others. Those age 55+ report starting weekday dinner at 6:17 PM on average, compared to 6:39 PM for those age 30-54 and 6:42 PM for those under 30. Perhaps counter to expectations that families with children would eat earlier than average, respondents living with one or more children report an average start time 5 minutes later than do those with no kids in the home. But this is an artifact of the ages of the respondents, because among adults age 30-54, those with children in the home start dinner 8 minutes earlier than do those of comparable age without children.

Most people eat the weekday evening meal at home. 80 percent of adults so report, with another 11 percent reporting eating at a restaurant and 4 percent at another's home; young adults are somewhat less likely than others to eat at home.

As shown in the chart, people begin eating just a little earlier at home than elsewhere – 6:31 PM compared to 6:42 at a restaurant and 6:39 at another's home.



When people go out to eat, they spend more time doing so. Those reporting evening eating at home on weekdays spend an average of 30 minutes, but those going out to eat at someone else's on weeknights spend 44 minutes and those dining at a restaurant spend an average of 68 minutes.

More generally, when people eat dinner with someone else, they take more time at it than others. 39 minutes versus 26 minutes. There is not much difference in time spent dining between young and old adults.

It is surprising, to me anyway, that relatively few people report eating dinner alone on weeknights. Only 20 percent of the adults who reported having dinner said they were alone in the room at the time. Among married couples, an impressive 79 percent said they had their weeknight dinner with their spouse.

About 30 percent of adults report spending time preparing dinner immediately before dining on weekdays, and among these reporters, 36 minutes is the average time spend preparing the meal -- as long as the average time spent eating it! Similarly, 15 percent of adults report cleaning up right after dinner, and among these, 24 minutes is the average time spent washing dishes and otherwise cleaning up.

## IX. Evening Activities

From the time they get up from the dinner table on weekday evenings (7:09 PM average) until they go to bed (11:05 PM average), the typical US adult has 4 hours and 5 minutes hours to spend.

A lot of this time is spent in front of the TV. 65 percent of all adults report watching some TV between 7 and 11 PM on weeknights, and among these viewers, the average time watching is 1 hour and 46 minutes.

Time in front of the tube is not continuous. 20 percent of all those who watch TV between 7 PM and 11 PM report taking at least one break during those hours. They do what one might expect. Of adults taking a break of 10 minutes or less during TV viewing between the hours of 7 PM and 11 PM, here are the most commonly reported activities:

<b>What People Do During TV Breaks</b>		
#1	16%	eating and drinking
#2	14%	washing, dressing, grooming oneself (bathroom breaks)
#3	13%	physical care for household children
#4	11%	food and drink preparation
#5	6%	travel related to relaxing and leisure (running back home?)
#6	5%	care for animals and pets
	<u>35%</u>	all other activities
	100%	all activities during TV breaks

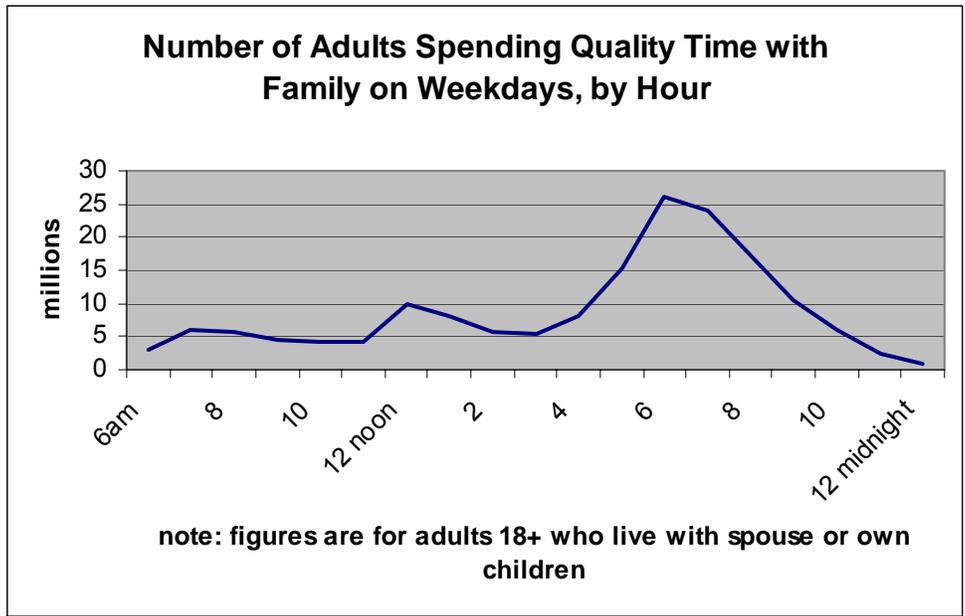
But not everyone spends the evening watching TV. For example, at 8 PM on weeknights, 3 percent of all adults report that they are “reading for pleasure.” And there are actually some people who spend more time reading for pleasure than watching TV – 9 percent of all adults, to be precise. Women and older adults are the most likely to read rather than watch, but even among these groups TV viewing dominates.

<b>Leisure Reading and Watching TV</b>						
Percentage of Adults Who Spend More Time During the Day:	<u>All Adults</u>	<u>Men</u>	<u>Women</u>	-----Age-----		
				<u>under 25</u>	<u>26-54</u>	<u>55+</u>
Leisure Reading	9	7	11	5	8	15
Watching TV	76	78	73	76	75	77
Do Neither	15	15	16	19	17	8
Total	100	100	100	100	100	100

note: figures are daily averages

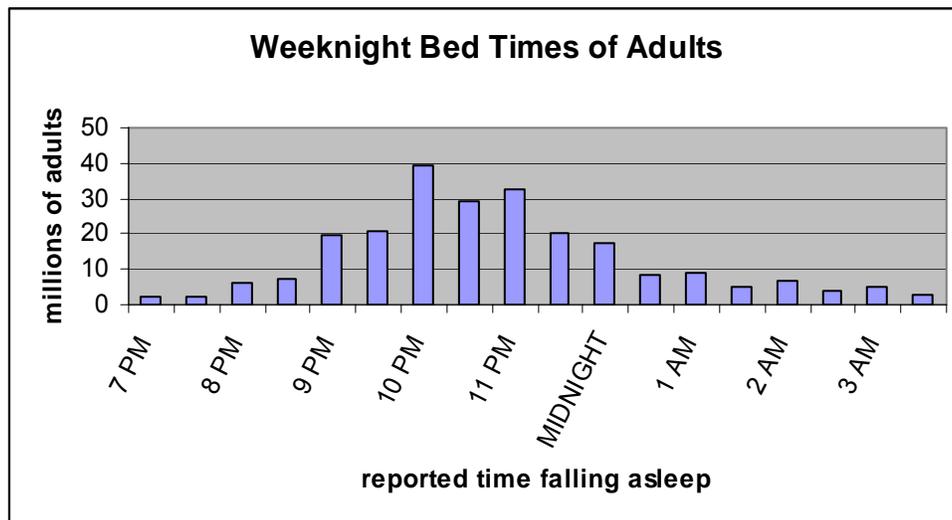
“Quality time” is a grammatically challenged expression whose general meaning is nonetheless clear to all – engaging in conversation and other interactive activities with family and friends. With the TV off.

With the ATUS we can identify adults who are dining with their spouse or children, or socializing/relaxing or playing non-computer games with these family members. By this definition, 78 percent of respondents with family spend some quality time on weekdays, and 81 percent report some quality time on weekends. Quality time comes mostly in the evening, as shown in this chart.



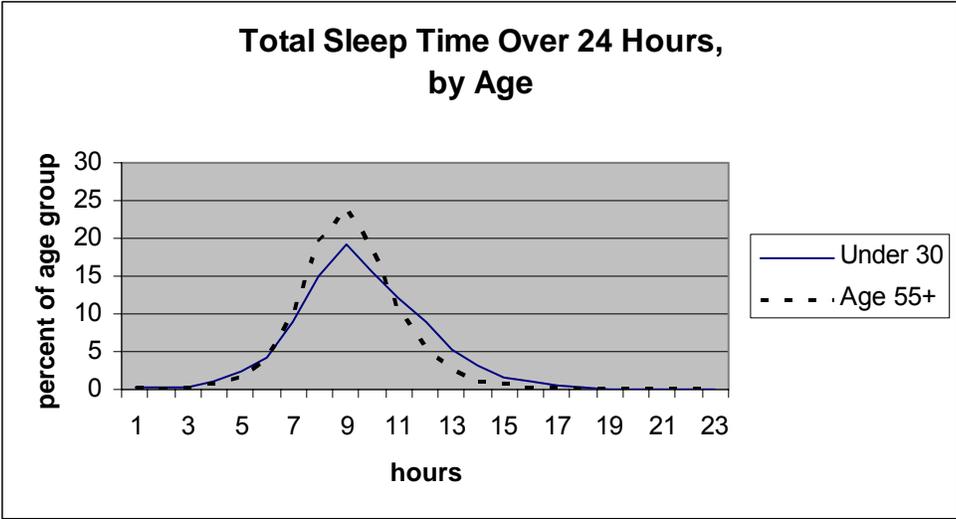
## X. Slumber Time

On weeknights, the typical (median) time when adults go to sleep is 10:42 PM. As shown below, there is wide variation around that average. About 8 percent of all adults go to bed before 9 PM on weeknights, and fully 25 percent are night owls who stay up past midnight.

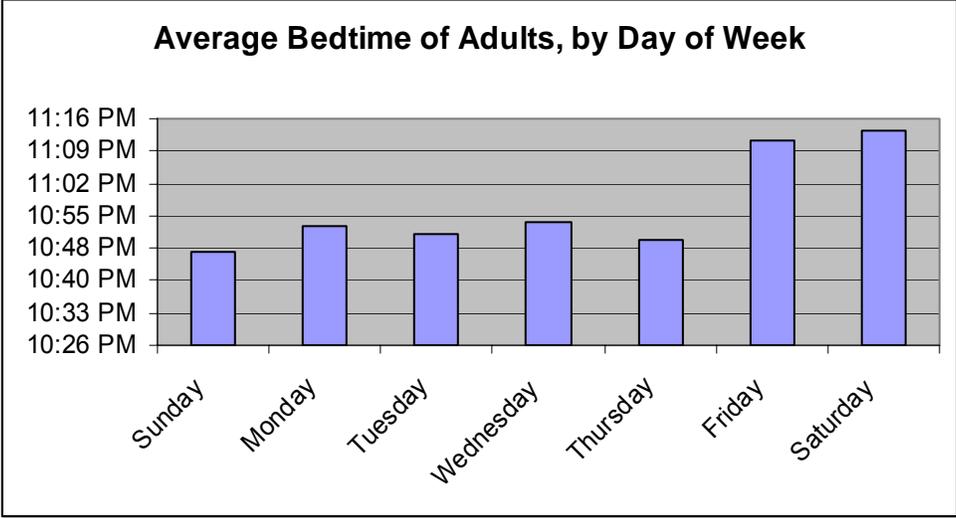


Who goes to bed earlier and later on weeknights? The elderly call it quits the earliest, with those age 55+ reporting a typical (median) sleep time of 10:31 PM, while young (<30) adults are the night owls, with a typical bedtime of 11:00 PM. Men and women overall report similar bedtimes, as do those with and without children living at home.

The typical adult sleeps a total of 8 hours and 25 minutes in a 24-hour period, but on weekdays, the total is only 8 hours even. The variance in reported sleep totals is not that great. 80 percent of all adults report a daily average of between 6 and 11 hours of sleep. Although they go to bed later than their elders, young adults also sleep in later in the morning and end up reporting more total sleep time than older adults: Those under age 30 average 8 hours and 48 minutes, compared to 8 hours and 15 minutes for middle age adults and 8 hours 32 minutes for those age 55 and over.



TGIF spirit keeps people up late on Friday nights. Regardless of age, people do stay up later on Friday than on other weeknights, as shown below. We seem to launch ourselves into the weekend, two days in which time is used quite differently than during the work week, as will be described in the next chapter.

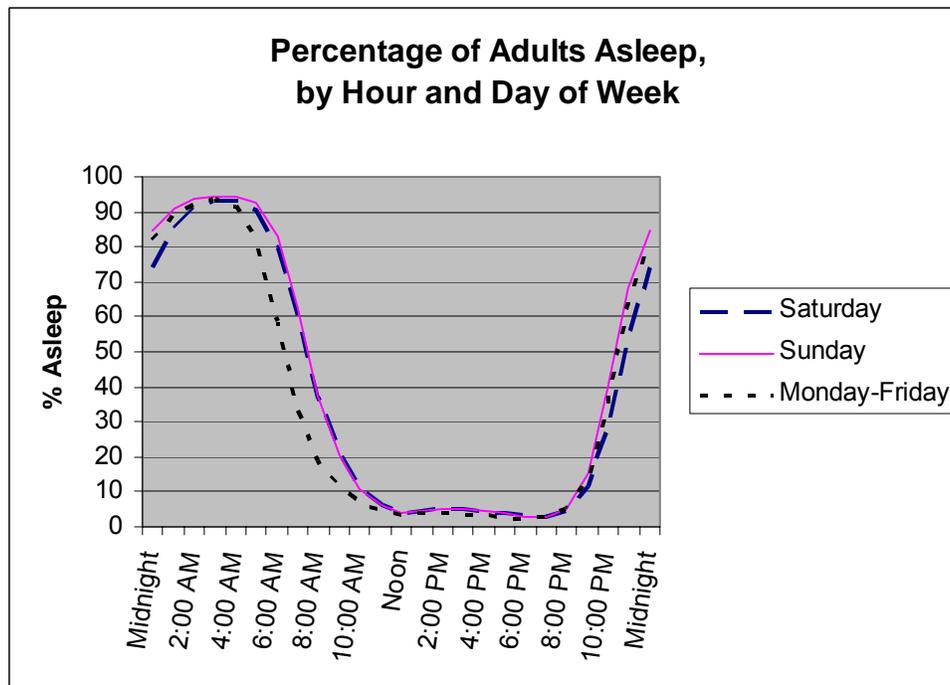


## Special Topics

### XI. Weekends

Time use is generally similar across the weekdays of Monday through Friday. But Saturdays and Sundays are different from weekdays, and from each other.

First of all, people catch up on their sleep. Despite staying up late Friday nights, late wake-ups mean that on Saturday (4 AM to 4 AM Sunday) adults average 8 hours and 57 minutes of sleep, as shown in the ranking table below and illustrated in the chart. And on Sundays (4 AM to 4 AM Monday), late sleep-ins and early bedtimes give the average adult a whopping 9 hours and 32 minutes of sleep. On weekdays adults average only 8 hours and 15 minutes of sleep. At 7 AM on weekdays, only 33 percent of adults are asleep, compared to 60 percent on Saturdays and 63 percent on Sundays.



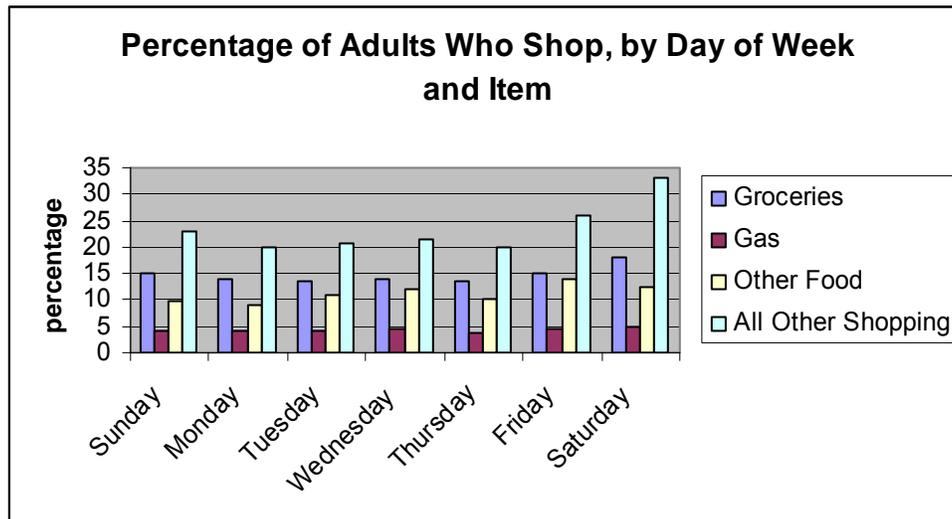
The biggest difference between weekends and weekdays is of course in hours spent working, which on weekends are only about one-fourth of the weekday average, as shown in the table below. People fill this freed up time with a range of activities, including TV viewing, socializing, and housework.

**TOP TEN USES OF TIME BY ADULTS, BY DAY**

<u>Saturday</u>	<u>Sunday</u>	<u>Weekday Average</u>
average minutes	average minutes	average minutes
537 sleeping	572 sleeping	496 sleeping
174 TV & movies	188 TV & movies	246 work, main job
79 work, main job	70 eating & drinking	145 TV & movies
71 eating & drinking	56 socializing & communicating with others	65 eating & drinking
57 socializing & communicating with others	52 work, main job	41 washing, dressing, & grooming oneself
37 washing, dressing, & grooming oneself	40 washing, dressing, & grooming oneself	33 socializing & communicating with others
30 interior cleaning	31 attending religious services	23 food and drink preparation
30 shopping, exc. groceries, food, gas	30 reading for personal interest	22 taking classes, degree
22 food and drink preparation	28 food and drink preparation	21 travel related to working
22 reading for personal interest	22 interior cleaning	21 reading for personal interest
379 all other	351 all other	328 all other

Shopping is another activity that is concentrated on weekends, or at least on Saturday, when the typical adult spends twice as much time shopping as on most other days of the week. In order, the big shopping days are Saturday (49 minutes spent by the average adult), Friday (32 minutes), and Sunday (31 minutes).

The timing of purchases depends somewhat on what is being bought. The ATUS respondents report on grocery shopping, other food shopping (mostly buying fast food or paying the pizza guy), and gasoline shopping separately from other shopping. Of these, shopping for groceries and for all other goods is most concentrated on Saturday, as shown below. If the survey day was a Saturday, 18 percent of the ATUS respondents reported grocery shopping, compared to the daily average of only 15 percent. And people get to the store earlier on Saturdays, with an average start time of grocery shopping of 1:36 PM compared to 2:10 PM for the week overall. On weekdays, some workers stop by the store after work.



Grocery shopping is a bit more leisurely, or perhaps extensive, on weekends than on other days. Grocery shopping on Saturday has an average duration of 46 minutes, compared to 41 for the week overall. Oh, and women are more likely to grocery shop than are men on any given day – 18 percent versus 11 percent.

*-- Internet Shopping*

The internet has a long way to go before it overtakes in-store shopping as the most common way people buy things.

Of all the reports of shopping (other than for gasoline, food, and groceries), only 2 percent occurred from home. These presumably were done by internet or telephone. 89 percent of these shopping episodes occurred in stores or malls, according to respondents.

The internet doesn't speed up shopping either. Home shoppers report spending an average of 54 minutes in this activity, while in-store shoppers report an average of 49 minutes, although travel to and from the store add to this time.

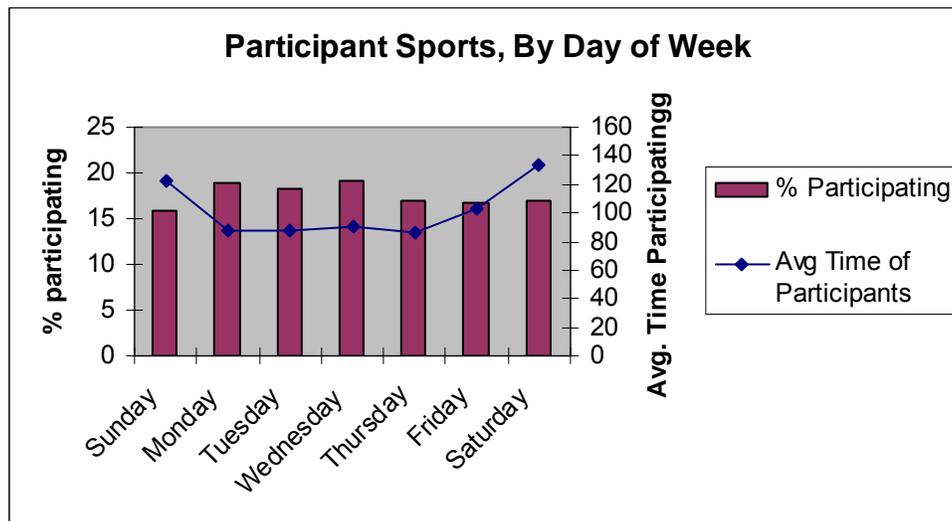
Home shopping does get spread over the week more than do trips to stores. Only 24 percent of the reports of from-home shopping occur on Saturday or Sunday, compared to 35 percent of the in-store shopping trips.

*-- Weekend Warriors*

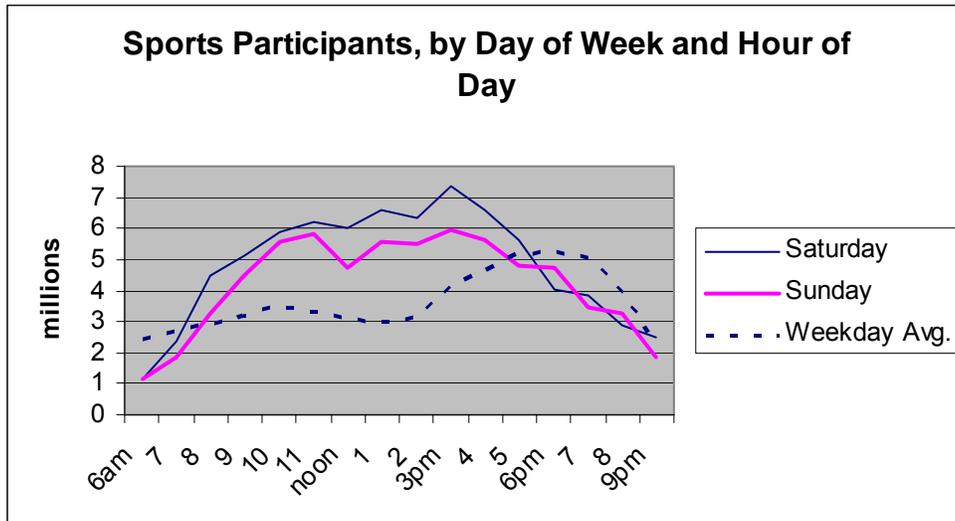
The percent of adults participating in sports on weekends is, perhaps surprisingly, not much higher than on weekdays. But that is where the similarities end. The type of sports activity, its duration, and the time during the day are all different on weekends than on weekdays.

On any day of the week, between 16 and 19 percent of adults report some form of participant sport, as shown in the chart below. Some of the most-often reported sports, including walking, are more common on weekdays than on weekends.

Even if sports participation is more common on weekdays, those adults who participate devote more time to it on weekends. Among those reporting any participant sports, the average time on Saturday is 134 minutes, and on Sunday 122 minutes, compared to a weekday average of only 91 minutes.



The workday effect is prominent in the timing of sports participation. As shown below, late afternoon and early evening is the most prevalent time for sports on weekdays, but on Saturdays and Sundays more people get out, and they get out earlier in the day.



The most popular sports depend on one's sex and age, as shown in this table. When was the last time you saw a woman fishing? The #1 sport among men does not even make the top ten list for women. Similarly, playing basketball ranks high among men, especially young men, but not among women. On the other hand, some sports – including walking and golf, rank high among both men and women.

## Top Ten Sports in Terms of Time Spent

### All Adults

<u>Participating</u>	<u>Attending</u>
1 walking	1 basketball
2 fishing	2 baseball
3 golfing	3 football
4 water sports	4 vehicle racing
5 weightlifting/strength conditioning	5 other sporting event
6 working out, unspecified	6 soccer
7 basketball	7 softball
8 using cardio equipment	8 bowling
9 hunting	9 hockey
10 billiards	10 equestrian sports

### Participating

<u>All Men</u>	<u>All Women</u>	<u>Men under 30</u>
1 fishing	walking	basketball
2 walking	water sports	weightlifting/strength cond'ng
3 golfing	working out, unspecified	water sports
4 basketball	using cardio equipment	fishing
5 weightlifting/strength cond'ng	weightlifting/strength cond'ng	billiards
6 hunting	running	walking
7 water sports	golfing	golfing
8 working out, unspecified	doing aerobics	sports not elsewhere classified
9 playing billiards	bowling	working out, unspecified
10 using cardio equipment	dancing	football

The sports people attend in person are different from the sports they play, as shown by comparing the two columns in the top panel of the table. The big three national spectator sports of basketball, baseball, and football are joined at the top of this list by vehicle racing (hello NASCAR). Furthermore, attendance at sports events is much more concentrated on weekends than is participation: 47 percent of all time spent attending sports events comes on weekends, compared to only 35 percent of the time spent participating in sports.

### -- *Bowling Alone*

This great title of Robert Putnam's bestselling book on the "collapse and revival of American community" captures his theme perfectly, but indeed bowling alone is pretty rare. Only two percent of those reporting bowling said they did so unaccompanied by family, friend, or colleague. Other popular sports, however, are often done alone.

<b>Proportion of Respondents Who Report Doing This Sport Unaccompanied</b>	
Working Out	71%
Walking	56%
Fishing	33%
Golfing	21%
Basketball	9%
Bowling	2%

Time use on holidays is more like that on weekends than on weekdays, but each holiday is different. For example, on Christmas people are much more likely to be socializing than on other days, as shown in the table below. New Years Day, by contrast, is a day for sleeping off the night before and for watching parades and football on TV. The number of respondents on any one day is small (between 114 and 200 for the holidays shown in the table), so the sampling errors are larger, but the differences revealed in the table are plausible.

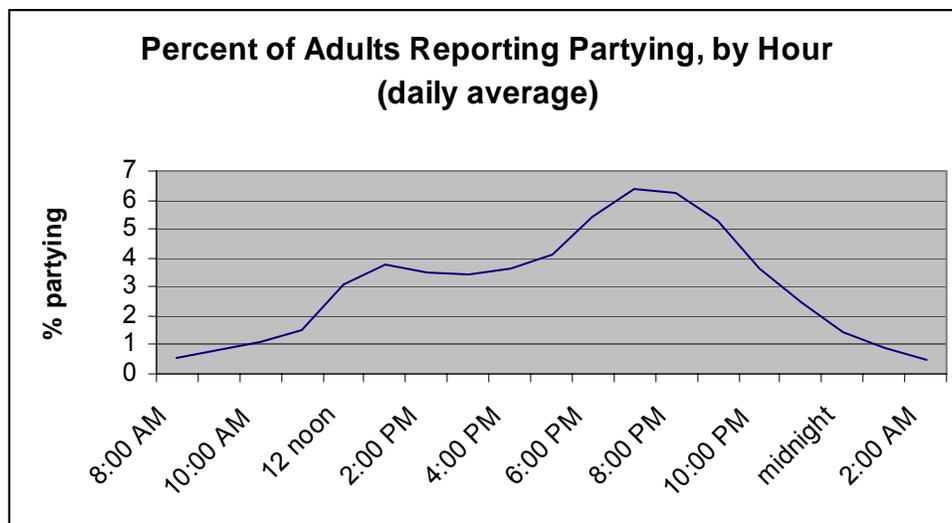
<b>Top Time Uses on Holidays</b>					
(daily averages, in minutes)					
	<u>Christmas</u>	<u>New Years</u>	<u>4th of July</u>	<u>weekend average</u>	<u>all day average</u>
sleeping	575	619	540	554	496
tv and movies	201	254	169	181	145
working at main job	34	37	29	66	246
eating and drinking	74	69	70	70	65
washing, dressing, grooming	28	28	39	38	34
socializing/communicating	191	53	92	57	70

*-- Party Animals*

Another activity concentrated on weekends is ... partying. How to define partying? It is one of those words that seem to have taken broader meaning in recent years. From the many possibilities, here we will define an adult as "partying" if he or she is with one or more friends, socializing or eating and drinking at someone else's home or at a bar or restaurant. By this definition, 34 percent of respondents surveyed about a Saturday report partying, 32 percent of Sunday respondents report partying, and only 22 percent of the Monday-Friday respondents report partying.

Men and women are about equally likely to party, with 25 percent of men and 26 percent of women reporting partying on the survey day. And, yes, young adults are the hardest partying crowd. 35 percent of those under age 30 reporting partying, compared to 22 percent of those in the 30-54 and 55+ age groups.

Partying begins at about the same time on weekends as on weekdays, with an average start time of between 4 PM and 5 PM, an early hour that implies a lot of happy hour encounters as well as lunch dates. These early parties are apparent in this chart of partying by hour. Partying lasts only slightly longer on weekends than on weekdays, with an average reported time of 84 minutes on Saturday/Sundays and 77 minutes on weekdays.



### -- Snuggling

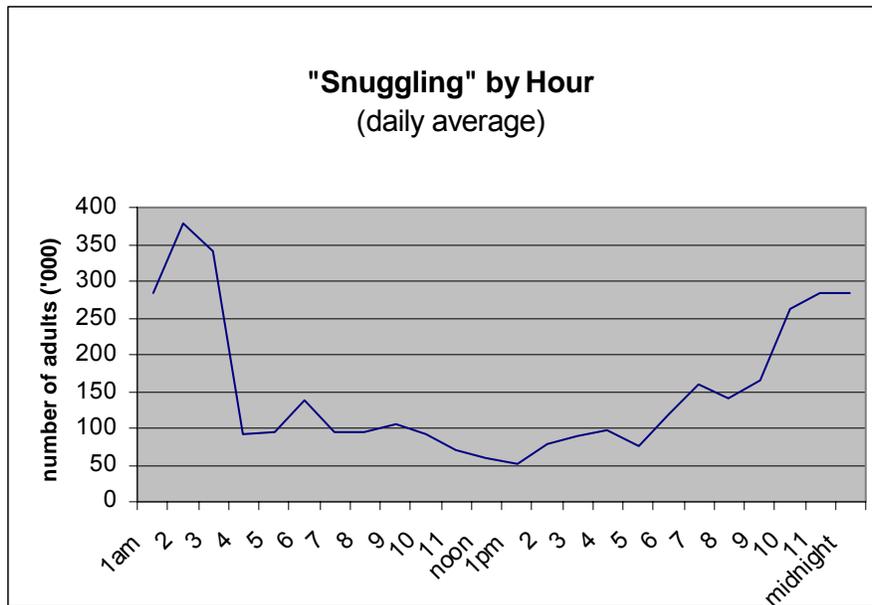
One activity that might be expected to be concentrated on weekends is... sex. But it is not, according to ATUS respondents.

One of the detailed activity codes in the ATUS is labeled “personal/private activities,” and the list of examples in the coding manual reads: “having sex; making out; cuddling partner in bed; necking; private activity, unspecified; personal activity, unspecified.” There are other listed activities that cover grooming, personal care and hygiene, and using the bathroom, so it seems likely that most of what is recorded as “personal/private activities” is sexual.

Two percent of all adults report these “personal, private activities,” which we will re-label “snuggling,” during the interview day. That percentage is lower than the estimates from most other studies of American sexual behavior, and it may be

that respondents are reluctant to reveal such private information to the ATUS interviewer.

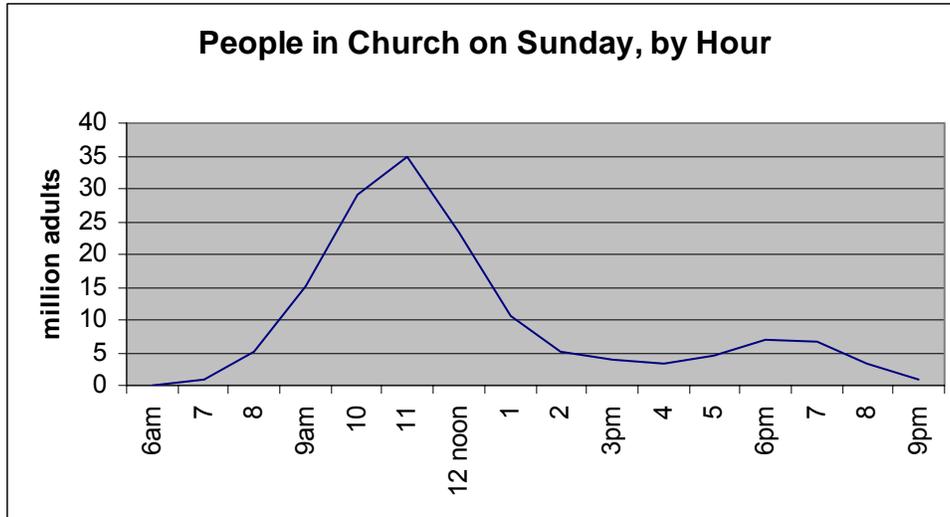
Snuggling is equally likely on all days of the week, according to respondents. Interestingly, snuggling is most likely to be reported as occurring in the dead of the night – 2 AM to be exact, as shown below. It is possible that other activities, in particular trips to the bathroom, are being misreported as “personal, private activities,” but the activity group in which bathroom trips should be reported shows no similar spike, so maybe in fact 2 AM is when adults are most likely to “snuggle.”



-- *Church on Sunday*

Seven percent of the ATUS respondents report being at a “place of worship” at some time during the interview day. If that day was a Sunday, the percentage is much higher – 26 percent. Of all time spent at a place of worship, 59 percent occurs on Sundays. Older adults and women are the most likely to report being at a church or other place of worship on the interview day.

Sunday church is a morning activity, but it also stretches well into the afternoon for many, as shown in the chart below. Of those adults reporting spending any time at a church or house of worship on Sunday, the average time spent there is 2 hours and 42 minutes (median of two hours and ten minutes).

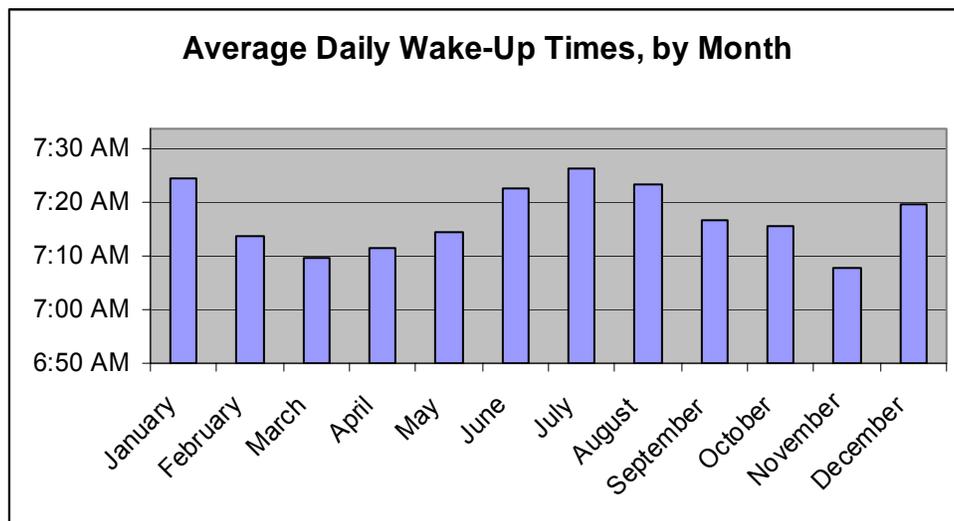


Churches are centers of activities much more diverse than simply attending services, which typically do not last more than two hours. The mean time reported for religious services alone at church on Sundays is 106 minutes, with a median of 90 minutes. Volunteer activities, socializing, and classes combined account for 35 percent of the time people spend at places of worship, as shown below.

<b>Time Spent at Church on Different Activities</b> <i>-- more than just prayer</i>	
<u>on Sundays</u>	<u>on any day of week</u>
attending or participating in services -- 72%	attending or participating in services -- 60%
volunteer activities -- 12%	volunteer activities -- 19%
socializing or attending meetings -- 7%	socializing or attending meetings -- 10%
taking classes -- 3%	taking classes -- 6%
all other activities -- 6%	all other activities -- 5%

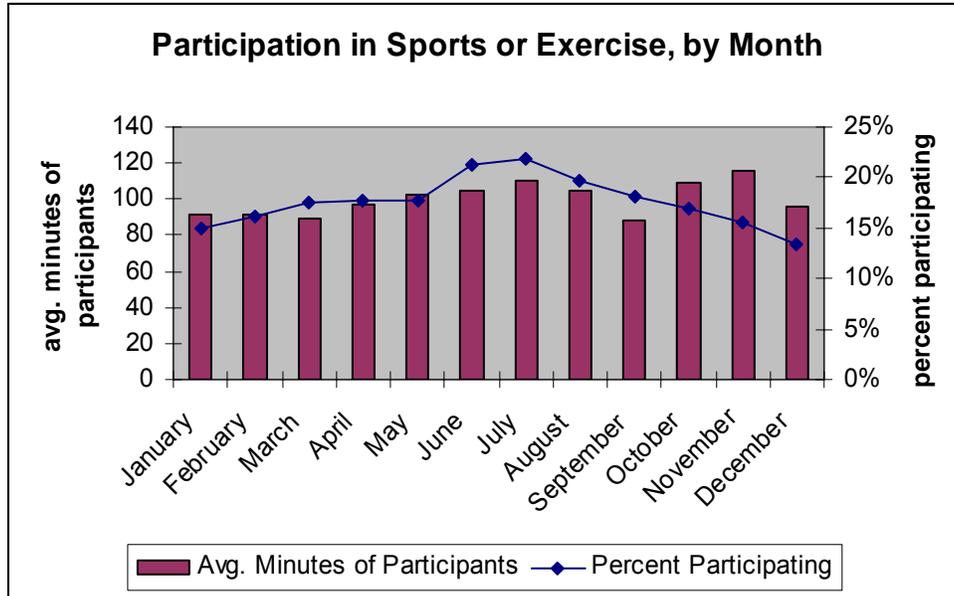
## XII. Seasons, Climates, and Time Use

How does time use vary with season of the year? In some ways it differs, in other ways it does not. I would have thought that the early sunrises in the summer months would make it easier for people to get up than in the dark cold winter mornings, but the evidence is mixed, as shown below. December and January do have later than average wake-up times, but so do the peak summer months of June, July, and August. Two influences may be at work: summer vacations and Christmas/New Year's holidays allow people to sleep in, and in the summer this vacation effect dominates the influence of bright sunshine coming through the bedroom window.



Exercise is another activity one might think would vary by season. We all complain about getting fat in the winter and needing to get into swimsuit shape for the summer.

Do adults get more exercise in the summer? Well, yes and no. As shown below, the percentage of adults who exercise on any given day does range from a low of 13 percent in December to a high of 22 percent in July. But those who do exercise spend about the same amount of time doing so regardless of season. The monthly range in minutes is from 88 to 116, with no clear seasonal pattern.



The types of sports and exercise vary somewhat by season. Walking tops the list both summer and winter, but water sports are in the top five only in the summer and basketball only in the winter.

### Top Sports, by Season

(percent of all reported sports activities are shown in parentheses)

<p><b><u>Summer</u></b> (April-October)</p> <p>walking (23%) working out, unspecified (9%) water sports (9%) weightlifting/strength conditioning (9%) cardio equipment (8%)</p>	<p><b><u>Winter</u></b> (November-March)</p> <p>walking (22%) cardio equipment (13%) working out, unspecified (12%) weightlifting/strength conditioning (11%) basketball (5%)</p>
---	---

For reasons of climate and population characteristics, time use might be expected to vary regionally. But at least as measured by where adults spend time, there is essentially no difference across four large states with distinct climates and demographics. Interestingly, the location category “outdoors away from home” accounts for a low one percent of the 24-hour day regardless of climate, as shown in the table. Even if the winter and summer seasons are examined separately, there is little geographic variation in where adults spend their time.

### Where Adults Spend Time, by State of Residence

( percent of 24 hours)

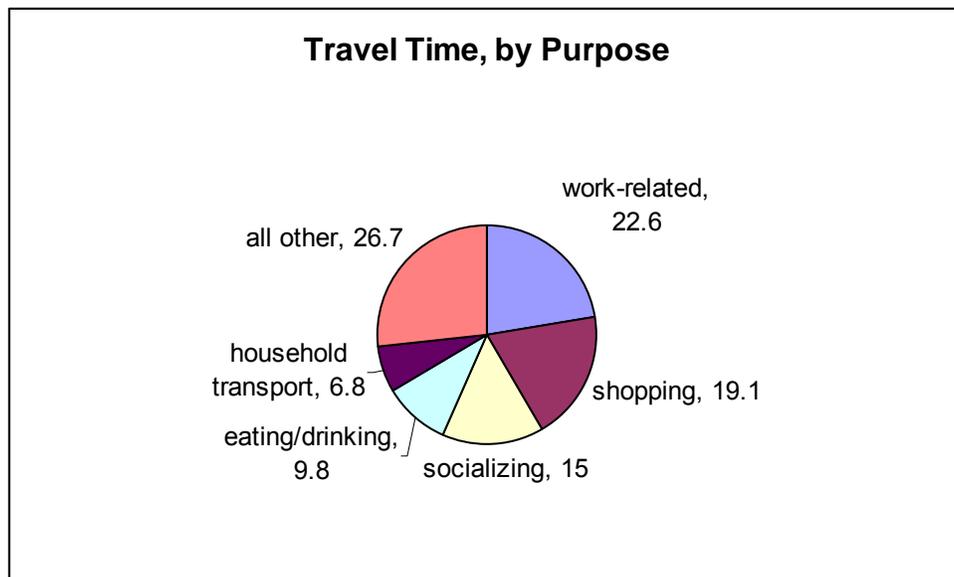
	California	Florida	Illinois	New York
presumed at home	40	39	39	39
reported at home/yard	29	30	31	31
workplace	13	13	12	12
some else's home	3	3	3	3
car driver or passenger	5	5	5	4
outdoors away from home	1	1	1	1
all other places	9	9	9	10
total	100	100	100	100

note: presumed at home includes sleeping, grooming, private/personal activities, and refusals, for which location information is not collected.

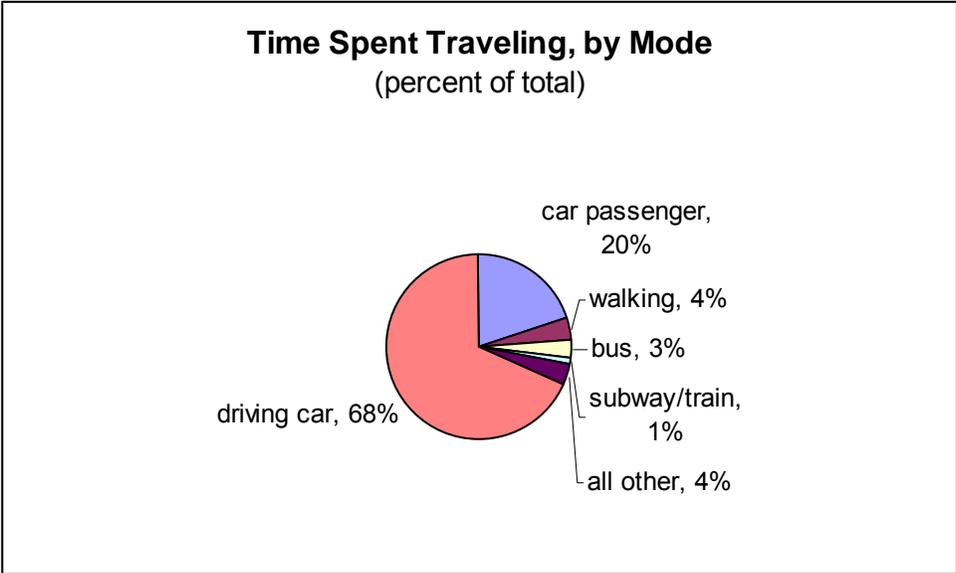
### XIII. Planes, Trains, and Automobiles

The average adult, on a typical day, spends 76 minutes “travelling.” In the ATUS, traveling is generally defined as any movement from one location (address or building) to another, regardless of mode or purpose. The main exceptions are that, if someone is walking or bicycling for exercise, that is not travel, and cab and truck drivers are working, not travelling.

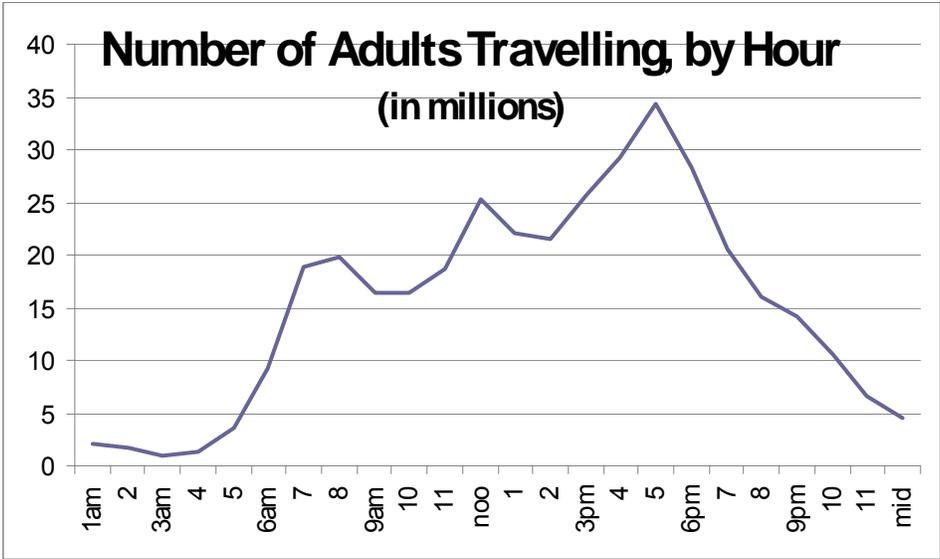
The time spent travelling during the day is spread across several purposes. Travel related to work accounts for 23 percent of all travel time of the typical adult, but shopping, socializing, and going out to eat also account for substantial shares of the total travel time.



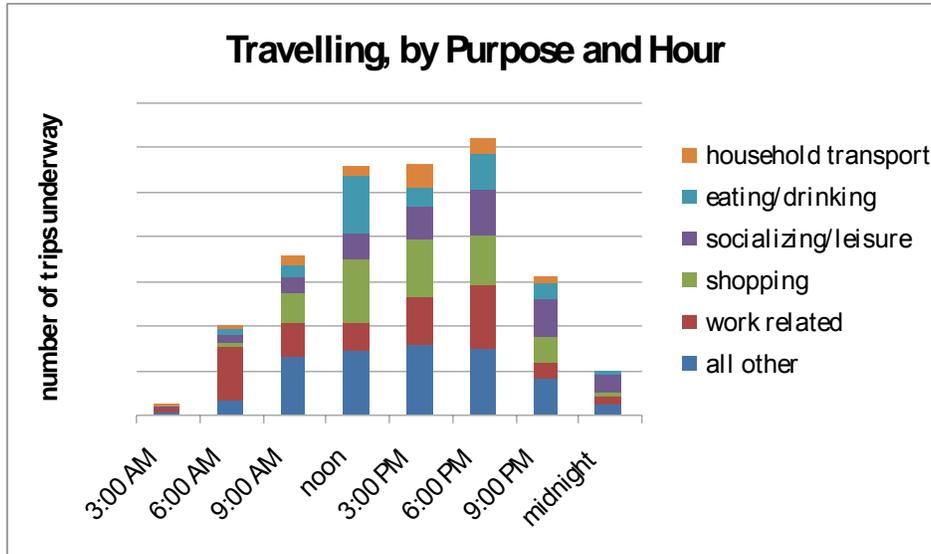
As for mode of travel, the automobile dominates. Of all travel time, 87 percent, or 66 minutes, is spent as a driver or passenger in a car. Walking, bus riding, and airplanes are the next most common, but they are not in the same league as the car.



Over the course of the day, the number of adults travelling increases from about 1 million in the dead of night to a peak of nearly 35 million at 5 PM in the evening rush hour. It is a bit surprising that there is no corresponding peak during the morning rush hour.

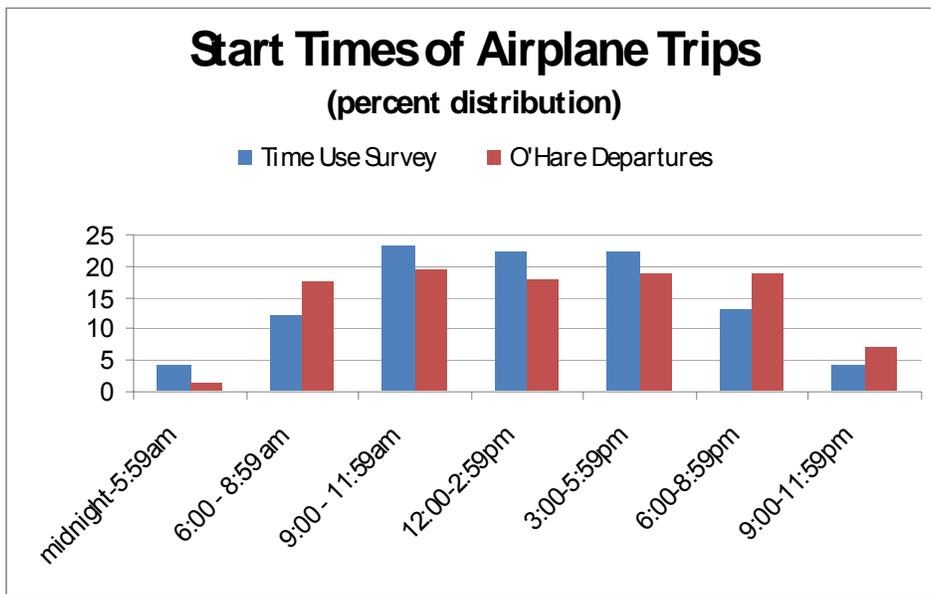


The reason for the solo peak in travel in the late afternoon is revealed by an examination of the purpose of travel, by hour. As shown below, commuters account for over half of all early morning travelers. But as the day goes on they are joined by those traveling for a variety of other reasons, and by early evening all of these travelers seem to be on the road or rails together.



The ATUS sample includes 293 reports of airplane trips. Although a small sample subject to more error than most other statistics in this report, these airplane travelers provide an interesting perspective on this mode of transportation.

The average length of a plane trip is 2 hours and 32 minutes, according to ATUS respondents. The average start time for these flights is 1:39 PM, although obviously flights start throughout the day, as shown in the chart. The reporting of start times for airplane travel is similar to the scheduling of airplane departures on a weekday (Thursday, May 22, 2008) from one of the nation's largest airports, Chicago O'Hare.



#### **XIV. So What?**

The uses of time by American adults are as diverse as those reporting them. The 47,731 respondents between January, 2003, and December, 2005, reported 954,752 distinct activities. The ATUS shows clearly that what people do, and when they do it, depends very much on who they are.

But some similarities are revealed also. Sleeping, working, and watching TV together account for at least half of the 24-hour day for 69 percent of all adults. The dominance of these three activities combined is remarkably constant across all age groups, income groups, family types, and sexes.

The purpose here has been to inform and to entertain, while showcasing a major new resource for studying how adults in the United States spend time. I have tried to tease facts and stories (dogwalking, activities during TV breaks, quality time, recluses, doing versus watching sports) out of the American Time Use Survey, all organized around the 24 hour theme.

This has not been intended as a comprehensive review and assessment of knowledge about time use from all sources, and the list of things this study does not do is formidable. There is little discussion of child care, family life, or work schedules. These have been the foci of many of the studies of time use listed in the bibliography. Nor have I described historical trends in time use or compared time use in the U.S. with other countries, again the topics of many other studies. The emphasis here has been on broad description, unlike the many academic studies emerging from the ATUS, which typically test specific hypotheses about how and why certain types of people spend their time.

Until the American Time Use Study was funded and fielded beginning in 2003, the U.S. had been somewhat of a laggard among wealthy countries in terms of what is known about how its residents spent time. To be sure, there had been many academic and commercial surveys of time use in the United States, but they had not been commensurate in scope with the size and diversity of the U.S. population. The ATUS has put the U.S. in the forefront of availability of data that can contribute to better informed economic and social policy by government and to more efficient production of better targeted goods and services by the nation's businesses.

## Technical Appendix

The tabulations in this report are based on the 24 hour diaries of 47,731 adult (age 15+) respondents, reporting a total of 954,752 distinct activities which are coded into 511 distinct activity categories. The data collection was conducted by the U.S. Census Bureau, under contract to the Department of Labor. The earliest diaries refer to January 1, 2003, and the latest to December 30, 2005. With the sampling weights applied, the respondents are representative of the adult population in personal characteristics, in locations, and in year, month, and day of the week. The data files from 2003, 2004, and 2005 were merged, and the sampling weights constructed, following the procedures in the ATUS technical documentation.

### Accuracy of Reporting

Estimates derived from the American Time Use Survey, like those from any survey, are subject to error.

The first source of error is attributable to misreporting of time use by respondents. As described in detail in several of the books listed in the bibliography, the daily diary method of recording time use has been found to be more accurate than other methods, including asking respondents how much time they normally spend on a specified activity. But respondents may unintentionally or deliberately misreport their use of time, errors can occur in the coding of responses, and survey non-responses may be correlated with time use. Despite efforts of the Census Bureau staff to minimize these errors, some undoubtedly remain. One acknowledged limitation of the ATUS is its focus on primary activities, which means that secondary activities conducted simultaneously (such as listening to music while doing something else) go unmeasured, with the exception of child care.

The second source of error arises from the possibility that the sample of 47,731 adults is not representative of the entire U.S. adult (age 15+) population of approximately 235 million (as of July 1, 2005). Even with application of weights to each interview to adjust for differences in sample coverage and response rates across population segments, locations, and time periods, the possibility exists that patterns in the sample data would not be observed if the entire adult population had participated in the ATUS.

I have tried to avoid presenting estimates and drawing conclusions based on small numbers of survey respondents and activity reports. In the few instances where the estimates are based on fewer than a thousand sample observations, I try to caution against unquestioning acceptance of the apparent pattern in the data.

While formal sampling errors can be estimated for the results presented in this report, it is complicated to do so, given the non-random design of the sampling, which renders textbook formulas of standard errors of statistics – based on the assumption of simple random sampling – invalid. However, spot checking of the standard errors of estimates provided by BLS in its publicly available set of unpublished tables suggests that the actual standard errors of estimates from the ATUS are of the same order of magnitude of those based on the assumption of simple random sampling. That similarity increases my confidence that the qualitative conclusions drawn in this study are likely to be representative not just of the ATUS sample, but of the full adult population of the United States.

### **About the Author**

Jack Goodman is an economist and demographer who has held senior research positions in industry, government, and academia over the past thirty years. His research has appeared in leading professional journals and trade publications, and he has been elected to the boards of several professional organizations. He recently formed the Time Use Institute to promote use of the American Time Use Survey in decision-making by business and government.

## Bibliography

The Web site of the U.S. Department of Labor's Bureau of Labor Statistics provides references and links to technical documentation of the American Time Use Study and to published studies and working papers based on the ATUS. I have drawn on many of those resources in conducting this analysis. Interested readers are referred to:

[www.bls.gov/tus](http://www.bls.gov/tus)

In addition, the following publications and documents that generally do not use data from the ATUS have been particularly helpful to me:

Jennifer Ackerman, *Sex Sleep Eat Drink Dream: A Day in the Life of Your Body* New York: Houghton Mifflin, 2007

Suzanne Bianchi, John P. Robinson, and Melissa A. Milkie, *Changing Rhythms of American Family Life* New York, Russell Sage Foundation, 2006.

Theresa Caplan, *The First Twelve Months of Life: Your Baby's Growth Month by Month*, New York: Perigree Books, 1993

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