

# **How Much has Leisure Really Increased Since 1965?**

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## Abstract

A recent paper by Aguiar and Hurst (forthcoming) argues that there has been a dramatic increase in leisure since 1965, ranging from 6-9 hours per week for men and 4-8 hours for women. In this paper, I show that their finding is due mostly to (i) inconsistent categorization of activities over time; and (ii) the inclusion of some activities as leisure, even though they rank low on the enjoyment scale. When I make corrections to their measures, I find that leisure has increased a more modest 1-4 hours for men and 3-5 hours for women. On the other hand, my corrected measures support Aguiar and Hurst's findings of increasing inequality in leisure trends across educational groups.

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## **I. Introduction**

In a recent careful study, Aguiar and Hurst (forthcoming) use data from time use surveys from 1965, 1975, 1985, 1993 and 2003 to measure changes in leisure over time for prime age individuals. Their work differs from the large literature in sociology on trends in time use in three key ways: (i) their method for holding demographics constant; (ii) their definitions of leisure; and (iii) their detailed study of the trends in inequality with respect to leisure.<sup>1</sup> To measure trends over time, Aguiar and Hurst link definitions over the various surveys in order to create a consistent categorization of activities over time. Since categorizing an activity as “leisure” or “work” is not always obvious, Aguiar and Hurst provide several measures of work and leisure. Based on their measures, they conclude that there has been a dramatic increase in leisure since 1965, ranging from 6-9 hours per week for men and 4-8 hours for women.

In this paper, I question the magnitude of their estimated increase in leisure. Although Aguiar and Hurst are meticulous in their attempts to construct consistent time use categories across time, they overlook a few subtle changes in definition that turn out to make a substantial difference. I demonstrate that most of their findings of a dramatic increase in leisure are due to inconsistent classifications of two key activities over time and questionable classifications of some activities as leisure. For example, I show that Aguiar and Hurst’s measure of total market work includes all meals and breaks during work hours for the early surveys, but includes only meals that are part of one’s job (e.g. taking clients out for lunch) in the 2003 survey. This misclassification leads Aguiar and Hurst to conclude incorrectly that total market work has decreased by over 4.5 hours from 1965 to 2003, when in fact it has decreased by 2.2 hours when

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<sup>1</sup> Examples of the related sociology literature are Robinson and Godbey (1999), which is a full length book studying data from 1965 to 1993, and Egerton, Fisher, and Gershuny (2005), which provides a detailed description of time use trends from the American Heritage Time Use Accounts from 1965 to 2003.

the inconsistent measures of meals and breaks are excluded from the work category. This error also affects Leisure Measures 2, 3 and 4 because they include eating and drinking as leisure, and their eating and drinking measure suffers from the same inconsistency (meals at work are excluded in early years and included in later years).

The second misclassification concerns gardening and pet care, which Aguiar and Hurst include in all of their measures of leisure. As Aguiar and Hurst themselves point out, in the surveys from 1965 to 1993 the gardening and pet care category did not include outdoor chores, such as raking leaves, yard work, and pool care. In contrast, the 2003 survey does not separate outdoor chores from gardening, and hence Aguiar and Hurst include them in the “gardening and pet care” category. Thus, this category increases noticeably in 2003 merely because of changes in classification. This classification error affects Leisure Measures 1, 2, and 3.

Finally, I question some of the activities that Aguiar and Hurst include as leisure rather than work, such as garden and pet care (particularly given its inconsistencies), primary child care, and care of other adults. I offer two metrics for determining whether an activity should be classified as leisure, one based on Reid’s (1934) definition of home production and another based on enjoyment indexes from the time use surveys. Based on these metrics, I argue that garden and pet care, as well as primary care of children and adults, should not be included in any category of leisure. Exclusion of these categories from leisure further dampens the trends identified by Aguiar and Hurst. Nevertheless, I continue to find the dramatic dispersion in leisure trends across educational groups highlighted by Aguiar and Hurst.

## II. Data

Aguiar and Hurst have generously made their compilation of the time use data, as well as many of their programs, available on their website (<http://troi.cc.rochester.edu/~maguiar>). The time use data from 1965 to 2003 are also available from the American Heritage Time Use Survey (<http://www.timeuse.org/ahtus/>), but for comparability I use the Aguiar and Hurst version. The years for which the time use surveys are available are 1965, 1975, 1985, 1992-1994 (called “1993” for short), and 2003.

Aguiar and Hurst control for demographics in all of their calculations using fixed weights based on the percentage of the population in each demographic cell. There are 72 demographic cells based on 5 age groups (21-29, 30-39, 40-49, 50-59, 60-65), 4 education categories (less than high school, high school graduate, some college, college degree or more), 2 sex categories, and whether a child was present in the household.<sup>2</sup> While it is easy to replicate their unweighted results using the programs and dataset they posted, key programs and datasets were missing for calculating the demographically weighted estimates. In particular, although they posted the programs that calculate these estimates, they did not post the dataset with the weights needed for these calculations. Based on the detailed descriptions in their paper, I calculated means based on fixed demographic weights. Apparently, though, there must be a small difference in the way I calculated the weights because there is a small difference in my averages and theirs (typically amounting to no more than 10 minutes a week). Therefore, the numbers I will refer to are based on my calculations of their statistics.

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<sup>2</sup> There are 72 rather than 80 categories because distinguishing whether there was a child present in the oldest age category was not necessary.

### **III. Inconsistent Classifications of Activities Over Time**

#### **A. Meals and Breaks at Work**

Aguiar and Hurst's Table II shows that from 1965 to 2003, core market work decreased by 1 hour per week, whereas total market work decreased by over 4 hours a week. The difference in "core market work" and "total market work" in their classification system is commute time, time spent in unemployment activities (searching for work, etc.), and "work-related," which includes travel while at work, meals, and breaks.

Virtually all of the decrease in total work hours stems from their category "work related." However, this decrease is because of an inconsistency across the various surveys in how meals and breaks at work are counted. The 1965, 1975, and 1985 surveys separate out all coffee breaks and meals at work from other "eating and drinking." Aguiar and Hurst include them in "work related." For the 1993 survey, Aguiar and Hurst's definition includes breaks at work, but not meals at work.<sup>3</sup> In the 2003 survey, Aguiar and Hurst's definition includes only meals that are related to work activities. The 2003 guidelines clearly specify that taking a lunch break during the work day should be classified as "Eating and Drinking" unless it is directly a part of work ( <http://www.bls.gov/tus/tu2003coderules.pdf> , p. 11). My calculations suggest that the types of meals included as work activities are inconsequential since even those people who work 35 or more hours a week have an average weekly hours spent in "work related meals" of only 0.08 hours per week (4.8 minutes) in 2003.

Table 1 shows how important this misclassification is for some of the results. The first row shows estimates based on Aguiar and Hurst's definition of "work-related." According to their classification system, hours spent in work-related activities fell by over three hours per

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<sup>3</sup> The classifications can easily be seen in the construction of the variable "work\_related" in Aguiar and Hurst's format\_65.do, format\_75.do, etc. files.

week from 1965 to 2003. The second row shows, however, that most of these work-related activities in the early years were actually meals and breaks. The total fell not because meals and breaks fell by so much, but because they were excluded in the later years from work-related activities and included instead in “eating and drinking.” The other part of work-related activities fell by less than one hour per week, as shown in the fourth row. The effect of correcting this misclassification is large. As seen in the bottom two rows, Aguiar and Hurst’s definition implies that total market work fell by 4.5 hours, whereas the definition of total work excluding all meals and breaks fell by 2.2 hours from 1965 to 2003. Below I will argue that work meals and breaks should be included with other eating and drinking since they score very high on the enjoyment index.

## **B. Garden, Pet Care and Other Outdoor Chores**

Aguiar and Hurst include “garden and pet care” in all four of their measures of leisure. Because they are not certain whether this category should be viewed as leisure or home production, they also include it in nonmarket work.

Like work related activities, though, Aguiar and Hurst’s definition of this category is also inconsistent over time. In the 1965, 1975, 1985, and 1993 surveys, outdoor chores, such as yard work and pool cleaning are included in their category “home\_car\_maintenance” rather than in “garden and pet.” In contrast, in the 2003 survey, yard work, pool cleaning, etc. are included in their “garden and pet” category because this survey does not separate out outdoor chores from gardening.

Table 2 shows the estimates and Figure 1 shows the graphs of the various categories of activities related to garden, pet, and outdoor chores. Note that Aguiar and Hurst’s definition of

“garden and pet” rises by over one hour per week between 1993 and 2003, whereas their definition of “home\_car\_maintenance” declines by 0.7 hours per week. The reason for these two categories moving in opposite directions is the reclassification of some key outdoor chores to “garden and pet.” The negative comovement between “home\_other” and “home\_car\_maintenance” from 1965 to 1985 also suggests that some activities are switching classifications from year to year. On the other hand, the totals of these three categories increase steadily from 1965 to 1985 and then remain roughly constant from 1985 to 2003. The increase in time spent in these chores is not surprising given the increase in the number of cars owned per household, the movement to the suburbs, and the shift in the population towards the sunbelt, where gardens and pools need maintenance all year.

Thus, part of the increase in Aguiar and Hurst’s Leisure Measures 1, 2, and 3 comes from inconsistent classification of outdoor cleaning activities. Aguiar and Hurst argue that this category is inconsequential anyway (p. 15). Below, I will show that including this inconsistent category does have a noticeable effect on their estimated leisure trends.

There are two ways to correct the misclassification. One is to include outdoor chores in garden and pet in the early years. The alternative is to exclude garden and pet from leisure altogether. I will argue below that the second alternative is superior because this category is best categorized as home production rather than leisure based on my two metrics introduced in the next section.

#### **IV. What Activities Should be Classified as Leisure?**

It is surprising that in a paper devoted to measuring trends in leisure, leisure is never defined. Aguiar and Hurst instead argue that because it is sometimes difficult to determine

whether to classify an activity as work or leisure, they provide several measures of work and leisure. I will argue here that all of their definitions of leisure include some very questionable classifications of leisure.

The fact that some individuals enjoy an activity is not grounds for classifying it as leisure; time spent in market work is universally coded as non-leisure time, although it is clear that some individuals enjoy their work. The most difficult activities to categorize are those that might be home production or leisure. Many researchers follow Margaret Reid in distinguishing leisure from household production by defining household production as “those unpaid activities which are carried on, by and for the members, which activities might be replaced by market goods, or paid services, if circumstances such as income, market conditions, and personal inclinations permit the service being delegated to someone outside the household group” (Reid (1934), pg. 11). According to this definition, an active market in a good or service that substitutes for a home activity would suggest that activity should be classified as home production rather than leisure. Based on these considerations, all research on time use in sociology classifies garden and pet care, child care and care of others as home production rather than leisure.

An alternative is to define as leisure those activities which give higher enjoyment. In fact, Aguiar and Hurst seem to have this definition in mind when they discuss their reasons for including child care in leisure rather than nonmarket work (e.g. see pp. 11 and 15). Like Ramey and Francis (2006), they refer to a survey reported in Robinson and Godbey (1999) on the enjoyment of various activities. As part of the 1985 Time Use Survey, individuals were asked to rate their enjoyment of various activities, with 10 being the highest and 0 being the lowest. Table 3 summarizes some of the key activities listed in Robinson and Godbey’s Table 0. The activities with the highest enjoyment scores (sex, playing sports, etc.) are ones that one would

generally classify as leisure. Work scores a 7 on the enjoyment scale, whereas housework scores a 5.8. The lowest scoring activities are going to the dentist (4.7) and taking the car to the repair shop (4.6).

Neither of these two metrics is perfect, but they at least allow us to judge activities with some consistency. Consider now Aguiar and Hurst's decision to include garden and pet care in all of their leisure categories. By the first metric, the active market in paid gardeners and pool cleaners suggests that this activity is more home production than leisure. The market for pet walkers and "doggy day care" is less well-developed, but has been growing recently. According to the enjoyment indices in Table 3, gardening scores slightly above work (7.1), whereas pet care scores a 6 and yard work scores a 5. Thus, only one of the three activities scores above work in enjoyment. Given the data limitations caused by the 2003 survey's combination of gardening and outdoor chores, they cannot be separated. How much does each account for? The 1993 survey is the only one that separates pet care, gardening and plant care, and outdoor chores. According to Table 2, in 1993 pet care accounted for 19 percent of the time spent in these three categories combined, gardening accounted for 21 percent, and outdoor cleaning accounted for 68 percent. Thus, almost 80 percent of the time spent in this category was in activities with low enjoyment scores. It seems inconsistent to classify market work as non-leisure time yet garden, pet care, and yard work as leisure time when most of its components have a lower enjoyment score than work.

The second class of activities that is difficult to classify is child care. Most sociologists include all interaction with children as home production. Aguiar and Hurst question this categorization because they argue that some time spent with children ranks high on Robinson and Godbey's enjoyment index. Let us consider this category more carefully.

Playing with children and talking and reading to children ranks very high according to Table 3. Thus, the enjoyment index clearly supports Aguiar and Hurst's classification of these activities as leisure. On the other hand, Aguiar and Hurst fail to notice that while baby care ranks just above work (at 7.2), other child care ranks at 6.4 (below cooking), and child health care ranks at 4.7. Thus, it is clear that based on enjoyment indices, and the fact that not all of the surveys separate out baby care from child care, primary childcare is best included in home production rather than leisure. This classification is also supported by the well-developed market in child care services. Fortunately, all of the surveys distinguish between primary child care and educational and recreational childcare, so it is easy to classify the last two categories separately.

Another issue, though, is measured trends in time spent with children, also discussed by Aguiar and Hurst. These measures dip significantly from 1985 to 1993 and then rise dramatically between 1993 and 2003. Table 4 shows hours spent in primary child care versus educational and recreational child care. Both categories display an increase of almost one hour a week from 1965 to 2003. Both measures also dip noticeably in 1993, before rising dramatically in 2003.

Most users of these time use data believe that the 1993 survey significantly undercounts primary child care (see Robinson and Godbey (1999) for a discussion of the methodological differences in the 1993 survey). On the other hand, the AHTUS online documentation makes the following statement about the 2003 survey:

Additionally, users should note that this survey collected a higher level of reported main activity child care time than the previous surveys. The cause of this reporting is under investigation. In part, political and global events may have increased parents' concern for physically monitoring their children. The effect may also be influenced by some aspect of the data collection. The cause is under investigation by a number of researchers." ( <http://www.timeuse.org/ahtus/documentation/docs/pdf/Using2003.pdf> )

We can gain some insight into which survey is most biased by looking at the results of a study that use an alternative survey. Because of concerns about differences in the 1992-94 study, Sayer, Bianchi and Robinson (2004) use the 1998 NSF study to measure trends in time spent in child care. They argue that the 1998 study is more comparable to the earlier studies. Figure 2 compares average time spent on basic childcare by mothers for Aguiar and Hurst's surveys and variables versus those by Sayer, Bianchi, and Robinson (2004).<sup>4</sup> (None of these estimates is demographically adjusted.) The graph suggests that the significant dip in 1993 may be due to problems with that survey. Moreover, once one compares the 2003 estimate to the 1998 estimate, the jump up in 2003 does not seem quite so dramatic.

With these caveats in mind, it makes sense to take a balanced approach and include primary child care in nonmarket work and educational and recreational child care in leisure time. If all time spent with children is over-counted in the 2003 survey, then both the home production and the broader leisure measure will be biased upward.

The final category that deserves consideration is "helping and caring for other adults." Aguiar and Hurst do not include this category in nonmarket work, and so it shows up as leisure in their "Leisure Measure 4," which is a residual. Time spent in helping and caring for other adults increased from 0.6 hours a week in 1965 to 1.6 hours a week in 2003. Some researchers suggest that this activity may be over-counted in the 2003 survey (Egerton et al. (2005)). Should this category be included with leisure? By the two metrics I have suggested, it should be included in home production rather than leisure. First, there is an active market in services for elderly adults that substitutes for home production. Second, care of adults ranks the same as basic childcare, 6.4 on the enjoyment scale, noticeably below market work and cooking.

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<sup>4</sup> Sayer, Bianchi and Robinson (2004) call all child care activity, including educational and recreational time, done as the primary activity "primary child care." To be consistent with what Aguiar and Hurst call "primary child care," I use Sayer et al.'s estimates of "daily child care," which excludes recreational and educational child care.

Finally, note that meals and breaks at work score high on the enjoyment index in Table 2, even above meals at home. Thus, it is entirely consistent to include them with other eating and drinking, especially in light of the limitations in categorization from the 2003 survey.

## **V. Trends in Corrected Definitions of Leisure**

In this section, I will offer several modifications to each of Aguiar and Hurst's measures of leisure, based on both corrections to inconsistent classifications over time in meals and breaks at work and gardening and pet, and reclassification of some activities from leisure to work.

Table 5 shows Aguiar and Hurst's measures, as well as the modified measures. Consider first Panel A, which applies to the full sample. The first two rows summarize the results of correcting for the inconsistent classification of meals and breaks at work on total market work, given in more detail in Table 1. This correction cuts the downward trend in total market hours worked from 4.5 to 2.2 hours per week. The next two rows compare Aguiar and Hurst's total nonmarket work (without child care) to total nonmarket work with primary child care and care of other adults added. (Aguiar and Hurst show total nonmarket work with *all* childcare in their Table II.) Using the categories based on the enjoyment index, we see that the decline in nonmarket work is 1.8 rather than 3.8, a difference of 2 hours. Thus, the combined effect of these adjustments on trends in all work is over 4 hours.

Now consider the various measures of leisure. All of Aguiar and Hurst's measures of leisure include garden and pet care, which we have shown to be inconsistently classified over time. The choice is either to add outdoor chores to this category in the early years or to eliminate the entire category from leisure. The previous section argued that since almost 80 percent of the

time spent in this category scored low on the enjoyment indexes, and because of the existence of well-developed markets in service substitutes, this category is best excluded from leisure.

The fifth and sixth lines of Table 5 show the effect of excluding garden and pet care from the Leisure Measure 1. Leisure Measure 1 includes time spent socializing, active and passive leisure, and garden and pet care.<sup>5</sup> Exclusion of the last category diminishes the upward trend in leisure by about 30% or 1.3 hours per week.

The modification to the Leisure Measure 2 has a much bigger effect. This measure of leisure adds personal care activities, such as eating and sleeping, to Leisure Measure 1. My two modifications correct for the two inconsistent categories, “garden and pet” and meals and breaks at work. That is, all eating and drinking, whether at work or elsewhere, are included in this measure with my modifications. When the inconsistencies are corrected for in Leisure Measure 2, the increase in leisure is only 2.1 hours per week rather than Aguiar and Hurst’s estimate of 5.7 hours per week.

Leisure Measure 3 adds all child care to Leisure 2. My modifications continue to exclude garden and pet care, include meals at work with all meals (to ensure the consistent classification over time), and exclude primary child care, which typically ranks below work on the enjoyment index. However, like Aguiar and Hurst, I include all recreational and educational child care in this measure of leisure. Here the modifications have an even bigger effect, implying an increase in leisure of 3 hours a week rather than 7.5 hours a week.

Finally, Leisure 4 is total time available less total market and nonmarket work. My modification reclassifies primary child care and care of adults as nonmarket work and

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<sup>5</sup> In their paper, Aguiar and Hurst state that they also include volunteering in this measure. Yet these activities (called “civic” in their programs) are omitted from the leisure measures in their programs.

consistently includes work meals with eating and drinking. The difference is an increase in leisure of 4 hours rather than more than 8 hours.

Panels B and C of Table 3 show the same calculations for men and women separately. While some of the details change, the impact is qualitatively similar. For example, for men Aguiar and Hurst's Leisure Measure 2 increases by 6.4 hours per week, whereas my corrections imply an increase in men's leisure of only 1.4 hours per week. For women, Aguiar and Hurst's measure implies an increase of 5 hours per week, where as my measure implies an increase of 2.7 hours per week.

How do my modifications change Aguiar and Hurst's conclusions on increasing inequality in leisure? Interestingly, those conclusions are not affected by my modifications. As an illustration, consider Table 6, which shows changes from 1965 to 2003 in Leisure Measure 2 and my modification of the measure for high school dropouts versus college graduates. As the table shows, both educational groups have smaller trends in leisure using my measure, but the dispersion of the changes between them does not change. It is interesting that my modification of Leisure Measure 2 implies that the college educated have 4 hours less leisure now than they did in 1965. The difference in leisure changes for male high school dropouts and college graduates is 12 hours per week for Aguiar and Hurst's measure and over 11 hours per week using my measure. For women, my corrections indicate a slightly greater difference in leisure trends for the two educational groups than Aguiar and Hurst's measures.

## **VI. Conclusions**

This paper has shown that much of what Aguiar and Hurst (forthcoming) have called a dramatic increase in leisure since 1965 is due to inconsistencies in the classification of activities.

I have shown that in the early years Aguiar and Hurst classified all meals and breaks at work with “total work,” whereas they classified virtually all meals and breaks at work as leisure in 2003. Second, I have shown an inconsistency in their “garden and pet” category that results in outdoor chores suddenly being classified as leisure in 2003. Third, based on two metrics I have argued that the category “gardening, pet care and outdoor chores” and the categories “primary child care” and “care of other adults” should be classified as nonmarket work rather than leisure.

The effects of all of these modifications on inferences about trends in leisure are substantial. Whereas Aguiar and Hurst argue that that leisure has increased from 6-9 hours for men and 4-8 hours for women, my corrections suggest that leisure has increased a more modest 1-4 hours for men and 3-5 hours for women.

On the other hand, my corrections do not affect Aguiar and Hurst’s conclusions on the increasing inequality in leisure. My measures also suggest changes of dramatic increases in inequality in leisure time across educational groups. Whereas the average male high school dropout had an extra 7 hours per week of leisure time in 2003 than in 1965, the average male college graduate had 4 hours per week *less* leisure time in 2003 than in 1965..

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**Table 1. The Effects of Inconsistent Classifications of Meals and Breaks at Work**

<b>Activity (hours per week)</b>	<b>1965</b>	<b>1975</b>	<b>1985</b>	<b>1993</b>	<b>2003</b>
AH Work-related	3.47	2.03	1.60	0.31	0.30
Meals and breaks at work	2.33	1.60	1.31	NA	NA
Meals associated with work activities	NA	NA	NA	NA	0.04
Work-related – excluding meals and breaks	1.15	0.43	0.28	0.17	0.27
AH Total work	36.11	33.49	32.61	32.20	31.63
Total work – omitting breaks and meals	33.78	31.90	31.30	32.06	31.60

All averages are demographically adjusted as in Aguiar and Hurst. “AH” denotes Aguiar-Hurst activity definition.

**Table 2. The Effects of Inconsistent Classifications of Outdoor Chores**

<b>Activity (hours per week)</b>	<b>1965</b>	<b>1975</b>	<b>1985</b>	<b>1993</b>	<b>2003</b>
AH “Garden and Pet” (includes outdoor chores in 2003)	0.43	0.55	0.76	0.64	1.73
Gardening & Pet Care	0.43	0.55	0.76	0.64	NA
Pet care only	NA	NA	NA	0.39	0.54
Gardening only	NA	NA	NA	0.43	NA
Outdoor chores only	0.43	0.79	0.85	1.27	NA
AH home_car_maint	1.09	2.16	2.05	2.26	1.59
AH home_other	1.37	0.73	1.54	1.42	1.13
Sum of garden & pet, home_car_maintenance, home other	2.89	3.44	4.35	4.32	4.45

All averages are demographically adjusted as in Aguiar and Hurst. “AH” denotes Aguiar-Hurst activity definition.

**Table 3. Enjoyment Rankings from the 1985 Time Use Survey**  
(from Robinson and Godbey (1999))

<b>Enjoyment Index</b>	<b>Activity</b>
9.3	Sex
9.2	Play sports
9.1	Fishing
9	Art, music
8.9	Bars, lounges
<b>8.8</b>	<b>Play with kids, hug and kiss</b>
<b>8.6</b>	<b>Talk/read to kids</b>
8.5	Sleep, church, attend movies
8.3	Read, walk
<b>8.2</b>	<b>Work break, meals out, visit</b>
8	Talk with family
<b>7.9</b>	<b>Lunch break</b>
7.8	Meal at home, TV, read paper
7.7	Knit, sew
7.5	Recreational trip
7.3	Hobbies
7.2	Baby care, exercise, meetings
<b>7.1</b>	<b>Gardening</b>
7	Work, homework help, bathe
6.7	Second job
6.6	Cook, work at home, shop
<b>6.4</b>	<b>Child care, help adults</b>
6.3	Work commute
6.1	Dress
<b>6</b>	<b>Pet care, classes</b>
5.9	Errands
5.8	Housework
5.5	Home repair, grocery shopping
5.3	Homework
5.2	Pay bills, iron
<b>5</b>	<b>Yardwork</b>
4.9	Clean house, dishes
4.8	Laundry
4.7	Child health, doctor, dentist
4.6	Car repair shop

**Table 4. Trends in Childcare**

<b>Activity (hours per week)</b>	<b>1965</b>	<b>1975</b>	<b>1985</b>	<b>1993</b>	<b>2003</b>
Primary Child Care	2.84	2.38	2.74	2.30	3.74
Recreational & Educational Child Care	0.86	0.74	0.91	0.81	1.80

All averages are demographically adjusted as in Aguiar and Hurst.

**Table 5 Modifications and Corrections to Work and Leisure Measures**

**A. Full Sample**

<b>Activity (hours per week)</b>	<b>1965</b>	<b>1975</b>	<b>1985</b>	<b>1993</b>	<b>2005</b>	<b>Change: 2003-1965</b>
AH Total Market Work	36.11	33.49	32.61	33.06	31.63	-4.47
Excluding meals & breaks at work	33.78	31.9	31.3	32.96	31.6	<b>-2.18</b>
AH Nonmarket Work	22.13	20.22	21.07	18.46	18.34	-3.78
Including primary child & adult care	25.56	23.62	24.35	21.3	23.72	<b>-1.84</b>
AH Leisure Measure 1	30.66	33.38	34.78	37.53	35.34	4.69
Excluding "garden & pet"	30.23	32.83	34.02	36.71	33.61	<b>3.38</b>
AH Leisure Measure 2	102.06	106.85	107.82	110.16	107.75	5.68
Excluding "garden & pet," including meals & breaks at work	103.96	107.89	108.37	109.43	106.05	<b>2.09</b>
AH Leisure Measure 3	105.76	109.97	111.48	113.27	113.28	7.52
Excluding "garden & pet," excluding primary child care including meals & breaks at work	104.82	108.63	109.28	110.24	107.85	<b>3.02</b>
AH Leisure Measure 4	109.77	114.28	114.32	116.48	118.02	8.26
Excluding primary child & adult care, including meals & breaks at work	108.66	112.48	112.35	113.74	112.68	<b>4.02</b>

All averages are demographically adjusted as in Aguiar and Hurst. "AH" denotes Aguiar and Hurst's definition

Leisure Measure 1: time spent socializing, passive leisure, active leisure, pet care and gardening.

Leisure Measure 2: Leisure Measure 1 + sleeping, eating, and personal care activities.

Leisure Measure 3: Leisure Measure 2 + time spent in primary child care and educational and recreational child care.

Leisure Measure 4: All time not spent in market or non-market work.

**Table 5 Modifications and Corrections to Work and Leisure Measures (Continued)**

**B. Men**

<b>Activity (hours per week)</b>	<b>1965</b>	<b>1975</b>	<b>1985</b>	<b>1993</b>	<b>2003</b>	<b>Change: 2003-1965</b>
AH Total Market Work	51.83	46.04	43.33	42.6	39.49	-12.34
Excluding meals & breaks at work	48.55	44.07	41.68	42.48	39.44	-9.11
AH Nonmarket Work	9.64	10.99	14.01	12.48	13.43	3.79
Including primary child & adult care	10.94	12.98	15.52	13.82	17	6.06
AH Leisure Measure 1	31.64	33.66	35.13	37.69	37.43	5.79
Excluding "garden & pet"	31.34	33.18	34.36	36.7	35.28	3.94
AH Leisure Measure 2	101.48	105.66	106.8	108.65	107.92	6.44
Excluding "garden & pet," including meals & breaks at work	104.46	107.15	107.68	107.77	105.82	1.35
AH Leisure Measure 3	102.93	107.07	108.47	110.11	111.18	8.25
Excluding "garden & pet," excluding primary child care including meals & breaks at work	105.13	107.48	108.3	108.33	107.18	2.04
AH Leisure Measure 4	106.53	110.97	110.67	112.92	115.08	8.55
Excluding primary child & adult care, including meals & breaks at work	108.51	110.95	110.8	111.7	111.56	3.05

All averages are demographically adjusted as in Aguiar and Hurst.

"AH" denotes Aguiar and Hurst's definition

Leisure Measure 1: time spent socializing, passive leisure, active leisure, pet care and gardening.

Leisure Measure 2: Leisure Measure 1 + sleeping, eating, and personal care activities.

Leisure Measure 3: Leisure Measure 2 + time spent in primary child care and educational and recreational child care.

Leisure Measure 4: All time not spent in market or non-market work.

**Table 5 Modifications and Corrections to Work and Leisure Measures (Continued)**

<b>C. Women</b>						
<b>Activity (hours per week)</b>	<b>1965</b>	<b>1975</b>	<b>1985</b>	<b>1993</b>	<b>2003</b>	<b>Change: 2003-1965</b>
AH Total Market Work	22.49	22.63	23.33	24.8	24.83	2.34
Excluding meals & breaks at work	20.99	21.35	22.31	24.72	24.8	3.81
AH Nonmarket Work	32.94	28.23	27.18	23.65	22.6	-10.35
Including primary child & adult care	38.23	32.84	31.99	27.77	29.55	-8.68
AH Leisure Measure 1	29.81	33.14	34.47	37.38	33.54	3.73
Excluding "garden & pet"	29.27	32.53	33.72	36.71	32.16	2.89
AH Leisure Measure 2	102.57	107.87	108.7	111.47	107.6	5.03
Excluding "garden & pet," including meals & breaks at work	103.53	108.54	108.97	110.87	106.25	2.72
AH Leisure Measure 3	108.21	112.48	114.08	116.01	115.1	6.89
Excluding "garden & pet," excluding primary child care including meals & breaks at work	104.55	109.63	110.14	111.89	108.42	3.87
AH Leisure Measure 4	112.56	117.15	117.49	119.55	120.57	8.01
Excluding primary child & adult care, including meals & breaks at work	108.78	113.81	113.7	115.51	113.65	4.86

All averages are demographically adjusted as in Aguiar and Hurst.

"AH" denotes Aguiar and Hurst's definition

Leisure Measure 1: time spent socializing, passive leisure, active leisure, pet care and gardening.

Leisure Measure 2: Leisure Measure 1 + sleeping, eating, and personal care activities.

Leisure Measure 3: Leisure Measure 2 + time spent in primary child care and educational and recreational child care.

Leisure Measure 4: All time not spent in market or non-market work.

**Table 6. Trends in Leisure by Educational Attainment**

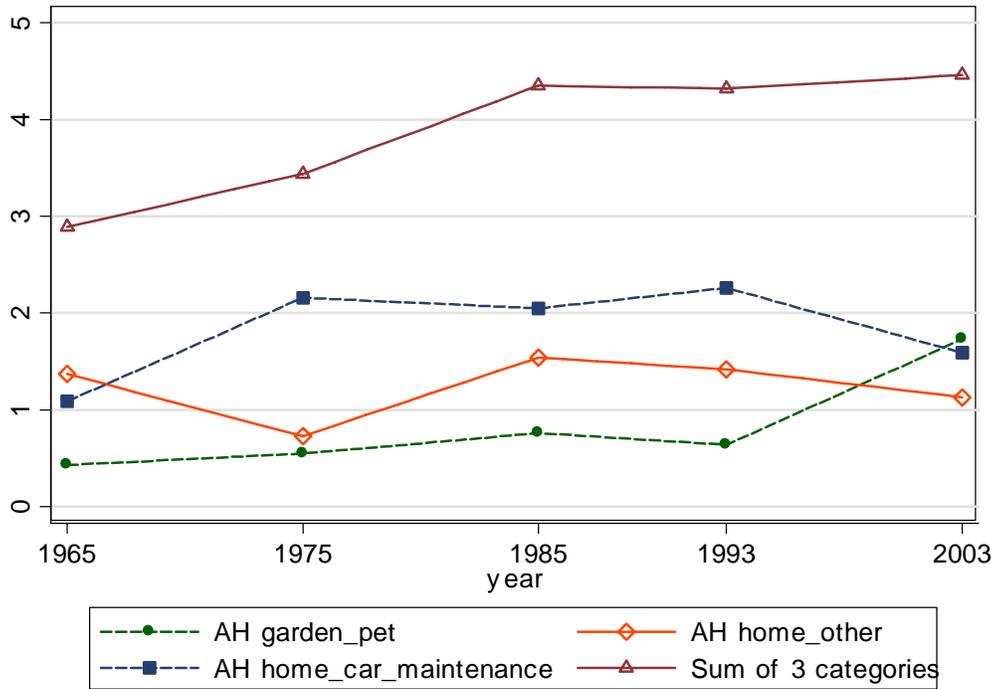
<b>A. Aguiar-Hurst Leisure Measure 2</b>				
	<b>Men</b>		<b>Women</b>	
	High School Dropout	College Graduate	High School Dropout	College Graduate
1965	103.87	101.38	105.60	101.64
2003	116.25	101.37	113.60	103.11
Change: 2003-1965	12.38	-0.01	8.00	1.47

<b>B. Corrections of Aguiar-Hurst Leisure Measure 2</b>				
	<b>Men</b>		<b>Women</b>	
	High School Dropout	College Graduate	High School Dropout	College Graduate
1965	107.02	103.68	106.31	103.18
2003	114.09	99.47	112.68	101.51
Change: 2003-1965	7.07	-4.21	6.37	-1.67

All averages are demographically adjusted as in Aguiar and Hurst.

**Figure 1. Hours Spent in Outdoor Home Maintenance Activities  
(AH refers to Aguiar-Hurst Definition)**



**Table 2. Hours Spent in Primary Child Care  
(All mothers, ages 18-65, unweighted)**

