

Original data included

The datasets harmonised are:

- 1965-1966 - Multinational Comparative Time-Budget Research Project, including a Jackson Michigan and a national USA sample, conducted by the Survey Research at the University of Michigan and the Social Relations Department at Harvard University, with funding from the National Science Foundation (part of the Szalai Multinational Time Budget Research Project).
- 1975-1976 - American's Use of Time: Time Use in Economic and Social Accounts, a panel study designed and administered by the Survey Research Center at the University of Michigan with funding from the National Science Foundation and the US Department of Health, Education, and Welfare.
- 1985 - American's Use of Time, administered by the Survey Research Center, University of Michigan with funding from the National Science Foundation and ATT, designed to compare the impact of self-completion mail-back, telephone interviewing, and face-to-face interviewing diary collection.
- 1992-1994 - National Human Activity Pattern Survey (NHAPS), administered by the Survey Research Center at the University of Maryland for the Environmental Protection Agency to produce data on exposure to environmental pollutants. This survey collected diaries from people of all ages, but did not ask marital status or income.
- 1994-1995 - National Time-Diary Study (NHAPS extension), administered by the Survey Research Center at the University of Maryland on commission for the Environmental Protection Agency to produce data on exposure to environmental pollutants. This survey collected an adult-only supplement as the original survey had only a single activity code for computing; however, this extension includes marital status and household income.
- 1998-2001 – This data set combines two small-scale surveys collected by the University of Maryland Survey Research Centre, the 1998-99 Family Interaction, Social Capital, and Trends in Time Use Study (FISCT), a small-scale contiguous state sample funded by the National Science Foundation, and the 1999-2001 National Survey of Parents (NSP), funded by the Sloane Foundation.
- 2003-2012 - American Time Use Survey (ATUS) conducted the United States Census Bureau and funded and co-ordinated by the United States Bureau of Labor Statistics, which collected diaries from a sub-sample of the population that had just completed the last of eight waves of the Current Population Study.

The purposes of the studies mean that their designs vary in significant ways. The 1965-66 survey sampled only respondents aged 19 to 65, living in households where at least one adult member worked in an industry other than agriculture. Only one member of sampled households completed a diary. The original study collected two samples, one from the city of Jackson Michigan and the surrounding rural areas in the state of Michigan that followed the Szalai sampling methodology, and a second and larger sample of 44 mainly urban census districts from around the country. Surveys with less than a full 24 hours of information seem not to have survived the years since the data were collected.

The 1975-76 survey was designed as a nationally representative sample of households. While the survey focussed on one person per sampled household, when the selected diarist was part of a couple, the spouse or partner was also asked to complete a reduced version of both the diary and questionnaire. The study followed the sample over four waves representing each season over a year all days of the week. We include the spouse diaries in a supplementary file. Attrition between the first and second waves of the dataset was in the order of 25%, attrition between the 2nd and 3rd waves about 8%, while a further 1% of respondents were lost between the 3rd and 4th waves. No information about tracking respondents is given in the main codebook for this survey, and it seems likely that respondents who moved house were lost from the survey. We calculated attrition weights for the subsequent waves of this data set.

The 1985 survey was designed as a nationally representative sample of households with telephones. We used only the mail-back element of the survey – the element for which episode data remains available. We are grateful to Professor John Robinson and Dr. Timothy Triplett for making these original files available to us. The largest sample, the mail-back, collected diaries from all household members aged 10+, while the other samples only collected one diary per household. Many versions of the 1985 data in circulation do not include the child diaries (which only are included in the mail-back sample). These child diaries were not included in the original version of the AHTUS as the background data associated with these diaries had been lost. These background data were subsequently recovered, and now are included as an AHTUS supplement.

The 1992-94 survey sampled households by random-digit dialling. One member of the household was asked to complete a diary about the previous day. The sample included people of all ages, though parents were asked to complete the schedules of young children. Child diaries are included in a supplementary file. This survey collected significant of additional information about exposure to smoke, sunlight, chemicals, and pollutants. In contrast with the earlier surveys, this study collected very limited personal characteristics from the diarists, and only collected main activity, but not secondary activity. The 1994-95 follow-on to this study collected more demographic information, but otherwise followed the NHAPS methodology and diary codes.

The 1998-99 FISCT and 1999-01 NSP surveys both used random-digit dialling and phone interviews to collect diaries from one person per household. The 1998-88 survey interviewed people aged 18+. The 1999-01 survey interviewed parents of children aged <18. The diaries for both surveys are similar, starting at midnight, and covering main as well as up to two secondary activities, location and who else was present. The oversample of parents is not always addressed in weights in some versions of this data, though this oversample is accounted in the AHTUS weights.

The 2003-2012 ATUS diaries collected from one person aged 15 or older in a subsample of households which had completed the eighth and final wave of the Current Population Survey (CPS). These data are designed to facilitate research into national accounts, and this survey offers the opportunity to examine longitudinal household information alongside time use. The ATUS collected diaries approximately two months after the final CPS interview. The main CPS over-samples small states. The time-use sub-sample of the CPS removes the over-sampling of small states, but introduced an over-sample of families with children and of Black and Hispanic households. This survey was the first to collect data continuously over a series of years. In the

first year (2003), the survey sampled over 3,000 persons per month. Budget cuts forced the collection of 35% fewer diaries in subsequent years. Half of the diaries were collected on week days, and half over weekend days. From 2006-2008, the ATUS has additionally included an eating, food purchasing, and health supplement funded by the United States Department of Agriculture.

The NHAPS and ATUS collected diaries from all states, while the NHAPS extension and older surveys sampled only the contiguous states and excluded some smaller rural states. For consistency across time, we include a weight that excludes states not covered in the earlier surveys, though an additional weight enables the user to include all available quality diaries. More detail on the datasets is given in the tables below. Original code books and further documentation is available for each individual survey on the Centre for Time Use Research (CTUR) web site: <http://www.timeuse.org/information/studies/>

Study aims, target populations, and sample restrictions			
Survey years	Organizing Aims and Considerations	Target Population	Sampling Restrictions
1965-1966	Comparability with the Multinational Comparative Time-Budget project collected in 12 countries	The national working age population (19-64) of the USA (excluding families where all members worked as farmers)	Only people aged 19 to 64 (with a few older diarists), and one person per household (Alaska, Hawaii, and some smaller, rural states excluded)
1975-1976	Measure national accounts and changes in time use over the year	The national adult population	People aged 18 or older and one person plus spouse if present per household
1985	Determine how people used their time and to compare diaries collected by post-out/post-back, phone, and face-to-face interview	The national population past secondary school age not living in institutions	People aged 10+ living in private households (Alaska, Hawaii, and some smaller, rural states excluded)
1992-1994	The study measured time use and exposure	The national population living in private residences	1 person of any age living in sampled private households with phones (Alaska and Hawaii excluded)
1994-1995	The study measured time use and exposure, and aimed to add some background variables missed out in 1992-94	The national adult population living in private residences	People aged 18+ (Alaska, Hawaii, and some smaller states excluded)
1998-1999 & 2000-2001	Measure social capital and quality of life for national sample, measure work-life balance for parents sample	The national adult population living in private residences; parents only in one survey	People aged 18+ for the national sample, parents of children aged <18 in the second
2003-2012	The study follows a sub-sample of the CPS for a 9 th wave to facilitate the study of national accounts	The national population not living in military bases or institutions	1 person aged 15 or older in the household

Relevant points in time from the sample designs			
Survey years	Fieldwork Period	Sampling of Days of the Week	When Activities Were Recorded
1965-1966	15 November -15 December 1965; 1 January - 18 February 1966; 7 March - 20 May, 1966	2/7ths of diaries were stamped for collection on a weekend day; 5/7ths were stamped for collection on a weekday	A two-stage tomorrow approach, diaries left behind for completion on diary day
1975-1976	Wave 1: 9 October 1975 - 22 November 1975; Wave 2: 6 February 1976 - 28 March 1976; Wave 3: 2 May 1976 - 19 July 1976; Wave 4: 4 September 1976 - 26 October 1976	The study aimed to collect one diary on a Sunday, one on a Saturday, and two on different weekdays from each sample member.	Diaries cover the previous 24 hour day
1985	Whole year of 1985	Mail-out after phone calls.	Diaries to be completed on a specified day in the subsequent week
1992-1994	September 1992 – October 1994	Phone calls were attempted on all days of the week.	Diaries cover the previous 24 hour day
1994-1995	July 1994 – July 1995	Phone calls were attempted on all days of the week.	Diaries cover the previous 24 hour day
1998-1999 & 2000-2001	National sample – March 1998-December 1999; Parents sample – May 1999- June 2000, a few remaining diaries through Spring 2001	Phone calls attempted on all days of the week	Diaries cover the previous 24 hour day
2003-2012	Samples drawn monthly, data released in yearly batches	Half of diaries were collected on weekday, half on weekend days.	Diaries cover the previous 24 hour day

Sample designs and response rates			
Survey years	Sample Frame	How Sample Drawn	Response Rate
1965-1966	Jackson, Michigan and surrounding townships, and a national sample	Jackson – random selection; National multi-stage clustered area sampling of clusters containing around 4 addresses; one individual per household	82% in Jackson; 74% in the national sample
1975-1976	Private households	Stratified, clustered and probability selection within strata. One individual was sampled per household. Data was also collected from spouses where present.	72% in the first wave; 44.9% responded to all four waves
1985	People aged 10 years or over, living in houses with telephones in the contiguous United States	Stratified and clustered, random-digit dialling, with only private residences pursued for an interview. Information on the household collected by telephone.	55.2% overall, 51% for mail back sample
1992-1994	Potential phone numbers within lists area codes	Random-digit dialling, only private residences pursued for interview. The person who would next have a birthday completed the diary.	63%
1994-1995	Potential phone numbers within lists area codes	Random-digit dialling, only private residences pursued for interview. The adult aged 18+ who next had a birthday completed the diary.	64.6%
1998-1999 & 2000-2001	Potential phone numbers within lists area codes	Random-digit dialling, only private residences pursued for interview. The adult aged 18+ who next had a birthday completed the diary.	1998-99 – 56% 1999-01 – 64%
2003-2012	CPS sample	A random sub-sample of the CPS, with the over-sampling of small states dropped but families with children over-sampled. Half of the diaries are collected on week days, the other half on weekend days	57.8% in 2003; 57.3% in 2004; 56.6% in 2005; 55.1% in 2006; 52.5% in 2007; 54.6% in 2008; 56.6% in 2009; 56.9% in 2010; 54.6% in 2011; 53.2% in 2012