

MTUS CODING PROCEDURES

World 5.5 (Release 3)

World 5.8 & World 6.0 (Release 1)

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Introduction

This document describes the coding procedures used to create Release 3 of the Multinational Time Use Study World5.5 data file. This guide covers the file structure, missing value conventions, construction of the harmonised variables, and quality checks. The information and procedures described here should be followed by anybody creating a harmonised dataset for MTUS.

Note that survey-specific and country-specific issues are not included in this document. When special conversion procedures are required for a specific survey in the World5.53, World 5.80 or World 6.0 formats, these special procedures should be described in the README file and comment lines in the conversion programme for that survey.

In order to standardise the coding procedure, the MTUS team has produced a syntax template. The template is in SPSS format and is available in electronic format from the MTUS website. This template serves as a guide to create World5.5 files. We additionally have produced a STATA do file with the labels for all variables and values.

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1. Preparation of the data

The World 5.53 and World 5.8 Versions of the harmonised MTUS datasets are restricted to the **aggregate (summary)** version of the time-use surveys. The MTUS includes survey, demographic and socioeconomic information about respondents (hereafter called diarists) and their households alongside the aggregated time-use variables. Each row case in the W5.53 and W5.8 files represents one 24-hour time diary. For those studies where respondents completed more than one diary, individual diarists appear on a separate row for each diary they completed.

The World 6.0 files include the sequence information, though this version will only be created for a limited subset of datasets as the process of conversion is more cumbersome, especially in the case of older time use surveys where information is reported for uneven intervals. In the World 6.0 episode files, each row case represents one change of main activity, secondary activity or location in a diary. Where the diarist completed more than one diary, the episodes of the subsequent diary or diaries follow the episodes of the first diary. As this file is large, only the identifiers, age and sex are included in the World 6.0 file alongside the diary information. Users will need to match the World 6.0 files with the corresponding World 5.8 file for the additional background variables.

Before beginning the actual conversion, users should undertake three steps to ensure maximum data quality.

DATA PREPARATION STEP 1 – Check alternative options for the MTUS background variables to ensure that you are using the option with the cleanest profile compared with other reported results and the least missing data. If there are options and one is better than others, the choice should be documented in the conversion syntax. In some cases, combinations of original variables are needed to create the MTUS variables.

DATA PREPARATION STEP 2 – Apparently missing main activity time in diaries is not necessarily missing. The point of the diary is to collect information about what people are doing at any point in time. Diarists sometimes do not fill in the main activity column – creating the appearance of missing data, but fill in other information elsewhere in the diary that nonetheless indicates their activity and allows us to properly code the time period. We should recognise that elements of the diary are not always separate. At points of overlap, diarists can record a comprehensible and clear response in the diary in one place but not in others. For example, an entry “too train to work” is both a location/mode of transport and an activity, and this dual meaning is clear even if the entry is written only once in either the main activity column or the location column. The redundancy of writing

the same entry in two places is not necessary for the diary to have a full account of a participant's activities. We recommend the following steps be undertaken where a main activity is missing before converting the data:

- a) Completing a time diary can be an onerous task, and some diarists do not appreciate making redundant entries. Where diaries have a location or mode of transport column and the diarist is travelling, some diarists may write "drive my car to work" or "on the bus" in the mode of transport column and see no point in writing the same entry in the activity column. When main activity is missing but the diarist has recorded a mode of transport during this time period, we recode the missing main activity slot as unspecified travel.
- b) Some diarists get confused while they complete the diary in a hurry, and may record the main activity in the secondary activity column. Another possibility is that a diarist may be undertaking a series of main activities while also doing an extended secondary activity – for instance alternating between care of pets, care of children and housework as main activities while listening to the radio. An item on the radio may be particularly interesting and attract the diarist's full attention for 10 minutes, but the 10 minutes of main activity radio listening is more efficiently recorded by simply extending the radio listening recorded in the secondary activity column. Where main activity is missing but a valid secondary activity is recorded, we recode the main activity as the reported secondary activity, and recode the secondary activity as no reported second activity. These are cases where the diarist has reported one valid activity.
- c) For short gaps in the early hours at the beginning or end of the diary where the diarist is at home or in the same location where they report sleeping on the diary day and asleep before the gap or asleep following the gap, we recode the gap as imputed sleep.
- d) if a short gap (<25 minutes) occurs at home just before travel or at home just after travel home, set the missing time to imputed personal and household care
- e) If there is other diary information that illuminates the activity in an episode where there is no recorded main activity, this should be used to identify the activity. As some examples, individual surveys in the past have recorded information as the number of cigarettes smoked during the episode, which television station the diarist watched if they watched TV during the episode, which type of material the diarist read if they read during the episode, and the like. Similar to the instance of the diarist recording a mode of transport but not recording a main activity, a diarist might record that they smoked 10 cigarettes in 15 minutes or watched a specific television station for 45 minutes but not record a main activity. Nonetheless, such records do reveal what the diarist was doing, so can be used to complete apparently missing time episodes.

All these changes are making use of information the diarist supplied about their activity, and this procedure eliminates some unnecessary wastage of diaries. All such data cleaning should be fully documented in the conversion programme.

DATA PREPARATION STEP 3 – Check to see if other diary information facilitates the coding of time use activities. Different studies code activities in different ways. Sometimes researchers need to use multiple columns from the diary to code a single activity. For instance, some surveys simply code “eating/drinking” in the main activity, and the location variable is needed to distinguish breaks at work (AV1) from eating meals at home (AV15) from drinking in a pub (AV27) from eating out in a restaurant (AV28) from eating a meal at a friend’s house (AV29). Likewise, location can distinguish socialising with friends at home (AV38) from socialising with friends away from home (AV29) or paid work (main job) at home (AV2) from paid work (main job) away from home (AV1). Who else is present information sometimes is needed to distinguish childcare from adult care. Some cases arise peculiar to only one dataset. For instance, Denmark 1964 includes an original code for all media use, but also has a separate column where diarists indicated what media they were reading, watching, or listening to, and this second column enables the separate coding of listening to the radio (AV30) from watching TV (AV31) to listening to music (AV32). All combinations of information used to code a category should be included in the documentation.

2. File naming conventions

We have standardised MTUS file names. The name of each file distinguishes:

- The country (2 or 3-letter code) (see table below)
- The year of the survey (4-digit)
- The version of the archive (World5.3, 5.8, 6.0)
- The type of file (extensions ‘sav’ or ‘dta’ for data files, and extensions ‘sps’ or ‘do’ for programme files)

For example, Release 3 of the World 5.5 version of Canada 1992 is called ‘Can1992W553.sav’, which should be read as:

Country: Can

Year: 1992

Version: W553

Type: sav (the SPSS version)

Note that in surveys for which the data collection spread over more than 1 year, SURVEY takes the value of the year when the data collection began. For example, Finland 1987/88 is referred to as FIN1987. For exceptions to this rule, see the survey-specific README documents.

Country	Code	Country	Code
Argentina	ARG	Latvia	LAT
Australia	AUS	Lithuania	LTH
Austria	OST	Netherlands	NET
Belgium	BEL	New Zealand	NWZ
Brazil	BRA	Norway	NOR
Bulgaria	BUL	Peru	PER
Canada	CAN	Poland	POL
China	CHI	Portugal	POR
Denmark	DEN	Republic of Korea	RKR
Estonia	EST	Romania	ROM
Finland	FIN	Russia	RUS
France	FRA	Slovak Republic/Czechoslovakia	SPA
Germany	GER	Slovenia/Yugoslavia	SLO
Hungary	HUN	South Africa	RSA
India	IND	Spain	SPA
Ireland	IRE	Sweden	SWE
Israel	ISR	Turkey	TUR
Italy	ITA	United Kingdom	UK
Japan	JPN	United States of America	USA

3. Template programmes

We have developed templates of variable and value labels for all three versions. These are located on the User Contributions page of the MTUS web site:

<http://www.timeuse.org/mtus/contributions/>

Examples of these SPSS syntax, STATA do files, and SAS programme files can be found in the Appendix of the MTUS documentation:

<http://www.timeuse.org/mtus/documentation/surveys/>

4. Missing value conventions

We use three codes to mark missing values, and a separate fourth convention for weights and identifier variables that are not present.

- “-7” refers to situations for we can create a variable for this survey, but we cannot create the variable for this diarist (or diary) as the respondent was not asked for the information on this diary or because the information is not relevant to that respondent (such as the employment status of a spouse for a person who is single and not living with a co-habiting partner). Although this missing value option potentially applies to all variables, it is mainly used for AGEKIDX, AGEKID2, WORKHRS, EMPSP, PARNTID1, PARNTID2, PARTID and EMPINCLM.
- “-8” refers to situations where we can create the harmonised variable for the study, but no information is recorded for this case (item non-response or insufficient information to create the variable for that case).
- “-9” refers to situations for which the harmonised variable could not be computed for the survey (with exceptions for weights and case identifier variables – although the identifier of spouse or of parents can have a -8 value if this could not be created for a case). Note that we use -9 with the time use activity variables to distinguish true 0s (the diarist did not record any time in this activity, though in theory they could have done so) from cases where no time is recorded in the activity because we could not create this time use category for this survey.

There are cases where an original weight is not present. In these cases, we use “0” rather than a missing value to indicate that this weight is not present in the study (and anyone attempting to use this weight would find they have no cases remaining for analysis from the survey). The conventions for the identifiers are set out in detail below.

Users also should note that we do not use missing values for the aggregated or summary time use variables, unless the category is not available for the whole survey. A value of 0 means that the diarist did not record any minutes in the activity (it is impossible to say for certain if this is because the diarist did not do any of the activity or if the diarist actually did undertake the activity but did not report doing the activity in the diary). If a category is not coded in the survey, then the summary value is set to -9 for the whole survey. Users should take notice of -9 values. If one sums time across a variable that cannot be created for a survey without first addressing the missing categories, 9 minutes will be subtracted in error for each category that is not present.

IMPORTANT NOTES

There are **no system missing cases** in MTUS data files. All cases for all variables have either a valid value or a standardised missing value.

The MTUS data files contain **no declared missing values**. MTUS users need to declare missing values if they choose to do so before running their analysis.

5. Defining good and bad-quality diaries

Diaries with large volumes of missing time do not account for enough of the day to allow imputation of what is likely to have taken place in the missing periods. Low episode diaries and diaries missing basic activities do not give complete accounts of the day. Low quality diaries lead to over-estimates of the activities the diarist does record and under-estimates of the activities the diarist did not record. Age, sex and day of the week are highly associated with specific time use patterns, and these variables are required for the creation of the recommended weight. We also classify diaries missing age or sex of the diarist or the day of the week on which the diary was completed as low quality diaries.

For this reason, the MTUS includes the variable BADCASE to distinguish quality diaries from diaries lacking sufficient standards for analysis. The MTUS team defines any diary which:

- continues to have 91 or more minutes of missing time,
- which has fewer than 7 episodes,
- which is missing two or more of four basic activities (defined below) - with 5 exceptions
 - Diarists may not record any travel when their travel episodes are very short, but may record a pattern in the diary that lets us know that they did travel and where in the day the travel took place. In such diaries, you will find patterns of continuous reports of activity, and a change of location (such as eating breakfast at home then doing paid work at the office) with no report of travel in between the change of location. We handle these cases by making a flag variable for unreported travel present (0=no such missed travel, 1=missed travel). If the diary includes 2 of the 4 basic activities, one of the 2 missing activities is exercise or travel and the diary is flagged as including missing travel, then we count this diary as a good diary. We do not alter the diary record in such cases, and users of the MTUS would have to make their own adjustments to the entries made by the diarists if they wish to account for such travel.
 - Diarists may not record any personal care when their episodes of personal care are short. In such diaries, you will find patterns of continuous reports of activity, and transitions where personal care is highly likely to have occurred (sleep for 2+ hours at home followed by other activities with no care, eating meals at home where the meal consumption lasts at least 10 minutes followed by other activities with no record of personal care). If such patterns are present, we make a flag variable for unreported personal care (0=no, 1=yes). If the diary is missing 2 basic activities, and one of these missing activities is personal care and we can flag this diary as having unreported personal

care patterns, then we count this diary as a good diary. We do not alter the diary record in such cases, and users of the MTUS would have to make their own adjustments to the entries made by the diarists if they wish to account for such personal care.

- Diaries of carers (either the variable “carer” flagging cases of people who look after an adult needing assistance =1 for yes, or the diary includes any time in any form of adult or childcare) who otherwise meet the other 4 good diary criteria count as good diaries.
 - Diaries including only 2 of the basic activities but that have at least 12 episodes where the diarist reports being at home all day (defined as no travel but eloc=1 – own home, or eloc=2 – other’s home for at least 1000 minutes), but otherwise meet the other 4 good diary criteria count as good diaries.
 - Other diaries including only 2 of the basic activities and 15 or more episodes count as good diaries.
 - which was filled in by a diarist whose age or sex is not known,
 - the day of the week on which the diary was completed is not known
- to be low-quality.

The four basic activities necessary for basic day-to-day functioning are:

- 1) eating or drinking (measured by time in these activities, or time recorded working with food (set or clear table, food preparation, cooking and the like), or the diarist being in a location where they are likely to be around food and drink, that is attending a feast or being at a pub or in a restaurant);
- 2) sleep or rest (including do nothing, think, time out, or take a work break)
- 3) personal care (including assumed self care preceding or following travel and receiving personal services, such as at hair dresser or doctor)
- 4) exercise and/or travel (including leisure excursions, gardening, walk dogs, imputed travel where no activity is recorded but the diarist records a change of location or records a mode of transport).

Note that only good-quality diaries have positive values in PROPWT. Low-quality diaries should have 0 values on PROPWT.

Some original surveys additionally include row cases for non-respondents who do not complete a diary. Nevertheless, most of the surveys do not include specific information on non-respondents in the data files. The MTUS format provides a suitable platform to analyse good-quality diaries as well as low-quality diaries, but users would need to take greater account of original survey information to investigate people who do not respond at all. When original surveys include case rows for non-diarists (people with 24 hours of no reported activity), we delete the non-diary cases.

6. Harmonised survey, demographic, and socio-economic variables

The harmonised background variables cluster into the following sets:

- **Diary, survey and case information**
COUNTRYA, SURVEY, SWAVE, MSAMP, HLDID, PERSID, ID, PARNTID1, PARNTID2, PARTID, DAY, MONTH, YEAR, DIARY, BADCASE
- **Household-level variables**
HHTYPE, HHLDSIZE, NCHILD, AGEKIDX, AGEKID2, INCORIG, INCOME, OWNHOME, URBAN, COMPUTER, VEHICLE
- **Person-level demographic variables**
SEX, AGE, FAMSTAT, CPHOME, SINGPAR, RELREFP, CIVSTAT, COHAB, CITIZEN
- **Employment and education**
EMPSTAT, EMP, UNEMP, STUDENT, RETIRED, EMPSP, WORKHRS, EMPINCLM, OCCUP, SECTOR, EDUCA, EDTRY
- **Health**
RUSHED, HEALTH, CARER, DISAB

For simplicity, we present the variables in the order in which they should appear in the final file.

COUNTRYA: Country or region of study

This variable records the country where the survey was carried out.

Value	Label	Value	Label
1	Argentina	20	Latvia
2	Austria	21	Lithuania
3	Australia	22	Netherlands
4	Belgium	23	New Zealand
5	Brazil	24	Norway
6	Bulgaria	25	Peru
7	Canada	26	Poland
8	China	27	Portugal
9	Denmark	28	Republic of Korea
10	Estonia	29	Romania
11	Finland	30	Russia
12	France	31	Slovak Republic/Czechoslovakia

13	Germany	32	Slovenia/Yugoslavia
14	Hungary	33	South Africa
15	India	34	Spain
16	Ireland	35	Sweden
17	Israel	36	Turkey
18	Italy	37	United Kingdom
19	Japan	38	USA

Two country issues deserve note. The 1965 Szalai survey collected separated studies in what were then East and West Germany. These two surveys are merged in the MTUS, though they are marked separately with the MSAMP variable. Yugoslavia participated in the Szalai study. One element of what was then Yugoslavia, Slovenia, has conducted more recent time use studies included in the MTUS. We mark the Slovenian data in the Yugoslavian survey separately from diaries from the rest of the then Yugoslavia in the variable MSAMP.

SURVEY: Year the survey began

This variable records the 4-digit year in which data collection began

SWAVE: Longitudinal study wave marker

This variable is relevant only for surveys that are longitudinal.

Value	Label
0	Not longitudinal
1	Wave 1
2	Wave 2
3	Wave 3
4	Wave 4

Note that in the case of Denmark 1987/2001 (with multiple samples), the code '1' in 1987 and 2 in 2001 indicates a longitudinal case, while the code '0' indicates that that it is not a longitudinal case.

MSAMP: Multiple samples using the same diary instrument

Value	Label
0	One sample
1	Szalai USA 1965 sample
2	National USA 1965 sample
3	USA 1998-99

4	USA 2000-01
5	Slovenia in Szalai Yugoslavia
6	Serbia in Szalai Yugoslavia
7	UK 1987 - main sample, drawn from SCEL survey
8	UK 1987 - spouses and additional household members
9	East Germany
10	West Germany
11	Basque Region in Spain

HLDID: Household identifier

This variable uniquely identifies households for those studies where more than one household member completed a diary. For surveys in which only one person per household completed a diary and no household identifier is included in the original data, HLDID=0. For surveys in which only one person per household completed a diary but a household identifier is included, HLDID takes the original value for the corresponding variable. If the household identifier should be combined with a higher level identifier, such as sampling region, then the value of HLDID should combine the larger group identifier and the household identifier so that each HLDID uniquely identifies one household.

In some limited cases, the original survey data does not include a household identifier even though the study collected a diary from more than one person in the household. In these cases, we construct a household identifier using a combination of other variables that enable us to make a unique identification (full details of these cases are explained in the survey conversion files where this was needed).

If the household identifier maps to other data but is not relevant to the time use survey or if the household identifier needs to be computed or adjusted in any way, an explanatory note should be included in the readme documentation file. The household identifier should enable users to match MTUS data back to the original survey.

PERSID: Person/diarist identifier

This variable uniquely identifies diarists within sampled households. For surveys with only one diarist per household, this identifier should uniquely identify each diarist. Use the original person-level identifier to allow users to match back to the original data. If no identifier was included with the data, construct an identifier from a combination of person and household-level variables that allows the unique identification of diarists.

ID: Diary identifier

This variable uniquely identifies each diary kept by each diarist. Normally, if the survey collected three diaries per participant, ID would have values between 1 and 3. Keep the original diary identifier if there is one to allow users to match MTUS data back to the original data. If the survey collected only one diary per diarist, ID should = PERSID.

PARNTID1: Person identifier of 1st parent of diarist

This variable records the person-level identifier of the first parent of the diarist if that parent also completed a diary. In cases where only one person per household completed a diary, this variable is coded as -9. If multiple people completed diaries in the household and the diarist does not live with a parent, this variable takes a value of -7. If the diarist lives with a parent and this parent should have but did not complete a diary or cannot be identified, this variable takes a value of -8. If both parents are in the same household and completed diaries, this variable takes the value of the parent with the lower personal identifier.

As the variable CPHOME marks unmarried children living with parents, cases of married people living with their parents can be identified by PARNTID1=-8 or >-7.

PARNTID2: Person identifier of 2nd parent of diarist

This variable records the person-level identifier of the second parent of the diarist if the parent also completed a diary. In cases where only one person per household completed a diary, this variable is coded as -9. If multiple people completed diaries in the household and the diarist does not live with a parent or only lives with one parent, this variable takes a value of -7. If the diarist lives with two parents and both parents should have but did not complete a diary or cannot be identified, this variable takes a value of -8. If both parents are in the same household and completed diaries, this variable takes the value of the parent with the higher personal identifier.

PARTID: Person identifier of spouse or partner

This variable records the person-level identifier of the spouse or partner of the diarist if the spouse or partner also completed a diary. In cases where only one person per household completed a diary, this variable is coded as -9. If multiple people completed diaries in the household and the diarist does not have a spouse or partner, this variable takes a value of -7. If the diarist has a partner who should have but did not complete a diary or who cannot be identified, this variable takes a value of -8.

DAY: Day of week diary kept

This variable records the day of the week when the diary was kept. Note that some older surveys only included all week averages or distinguished Saturdays and Sundays from week days, but did not distinguish week days.

Value	Label
1	Sunday
2	Monday
3	Tuesday
4	Wednesday
5	Thursday
6	Friday
7	Saturday
8	Whole week average
9	Weekday

MONTH: Month diary kept

This variable records the month when the diary was kept. Some surveys only record the quarter or season when the survey was carried out. In such cases, we assumed that the survey was conducted during the first month of the quarter even though the data collection was actually spread throughout the quarter. Such cases are documented in the relevant README documents.

Value	Label
1	January
2	February
3	March
4	April
5	May
6	June
7	July
8	August
9	September
10	October
11	November
12	December

YEAR: Year diary kept

This variable records the year when the diary was kept.

DIARY: Diary order

When surveys collected more than one diary per person, this variable records order in which diaries were completed. For surveys that collected only one diary per participant, this variable takes the value 1.

Value	Label
1	First diary day
2	Second diary day
3	Third diary day
4	Fourth diary day
5	Fifth diary day
6	Sixth diary day
7	Seventh diary day
8	Weekly average

BADCASE: Marker of low-quality cases

This variable distinguishes quality diaries from various categories of low-quality diaries. We define quality diaries as those which:

- (a) have valid values for day of the week the diary was kept as well as a significant proportion of basic background variables about the diarist, including age and sex;
- (b) have no more than 90 minutes missing time per 24-hour diary (calculated after diary processing, filling in gaps in main activity with information recorded in other sections of the diary);
- (c) have at least 7 episodes per 24 hours (defined from the original sequence data as a change in main activity, secondary activity or location);
- (d) have at least 3 of the 4 basic activities described in Section 5 above which most people undertake at least once per day (the exception is for people who recorded care of adults, children or pets on their diary day – diaries of people who performed care are counted as good diaries as long as the basic diary and respondent information is present, sufficient time is accounted and enough episodes are reported). The four basic activities include: Sleep and rest; eating and drinking; self care; and travel or exercise.

Value	Label
0	Quality diary
1	Missing age or sex of diarist only
2	Missing day of week diary completed only
3	Missing 91+ minutes only

4	Fewer than 7 episodes only
5	Missing 2-4 of four basic activities
6	Missing diarist's age or sex and day of the week
7	Missing diarist's age or sex and 91+ minutes
8	Missing diarist's age or sex and <7 episodes
9	Missing diarist's age or sex and 2+ basic activities
10	Missing day of week and 91+ minutes
11	Missing day of week and <7 episodes
12	Missing day of week and 2+ basic activities
13	Missing 91+ minutes and <7 episodes
14	Missing 91+ minutes and 2+ basic activities
15	<7 episodes and missing 2+ basic activities
16	Missing age/sex, day of week, & 91+ minutes
17	Missing age/sex, day of week & <7 episodes
18	Missing age/sex, day of week, & 2+ basic acts
19	Missing age/sex, 91+ minutes & <7 episodes
20	Missing age/sex & 91+ minutes and 2+ basic acts
21	Missing age/sex & 2+ basic acts, <7 episodes
22	Missing day of week, 91+ minutes & <7 episodes
23	Missing day of week, 91+ minutes & 2+ basic acts
24	Missing day of week <7 episodes & 2+ basic acts
25	Missing 91+ minutes & 2+ basic acts, <7 episodes
26	Missing age/sex, day of week, 91+ minutes, & <7 episodes
27	Missing age/sex, day of week, 91+ minutes, & 2+ basic acts
28	Missing age/sex, day of week, 2+ basic acts & <7 episodes
29	Missing age/sex, 91+ minutes, <7 episodes, & 2+ basic acts
30	Missing day of week, 91+ minutes, <7 episodes, & 2+ basic acts
31	Low quality on all five measures

HHTYPE: Household type

This variable records the type of household in which the diarist lived at the time of the survey. This variable is computed from a household type variable or a household grid when available, and from a combination of marital status and household size when no household type classification was available. Where there is inconsistency in the reporting in the survey, the converter should opt for the most logical solution and document the process of coding this variable in the code file.

One person households have only 1 member. In instances where a household size variable suggests that there is only one household member, but the person is also a parent and not in a couple and at least one child also lives in the household, then the household type should be coded as 4.

Values 2 and 3 mark instances where a household includes a couple (cohabiting or married). If the couple are the only people in the household (and the household size=2, then the appropriate code is category 2. If a couple lives in the household with at least one other person, then the code is 3. It does not matter if the couple are lodgers of the household reference person, or the household is a multi-couple household, or the reference person is a widow/widower or divorced person and has a child who has a partner that lives in the same household, or is a couple and children, the appropriate code is 3. If two or more people live in the household, and no household member is in a couple, then the appropriate code is 4. A crosstab of civstat and hhtype should produce no cases of a person with civstat=1 and hhtype=4.

Value	Label
1	One person household
2	Couple alone
3	Couple + others
4	Other household types

In some surveys, we cannot identify cohabiting couples, and these people may be miscoded as HHTYPE =4. Some surveys make the identification of single parent households difficult. If there are potential miscodes in this variable, these should be noted in the documentation.

In contrast to FAMSTAT, this variable is a household characteristic and all household members should be coded the same way.

HHLDSIZE: Number of people in household

This variable records the total number of household members. In some surveys, the size of large households is capped, with the value 'n' meaning 'n or more members'. Such cases are documented in the README documents.

There are cases where household size is not presented directly or in full. In such cases, we made the best possible calculation based on what information is available (summing number of income earners + non-income earners, number of people listed on the household matrix, 2 + the number of children for couple households with children, etc.). Any instances where this information is incomplete for a survey should be documented in the readme file for the survey.

General notes on 3 household child variables

If a household member is a dependent child, someone will have a legal responsibility for looking after that child, and the presence of the child in the household will likely have some impact on the behaviour of other household

members (if only in influencing the storage of chemicals, use of language, some late night leisure activity choices, or timing of some forms of housework). NCHILD values 1 and higher, AGEKIDX values 1, 2 & 3, and AGEKID2 values 0 through 17 indicate that a child of this age lives in the household. The relationship of the child to the other household members does not matter. In some cases, a child may also be the household reference person. If a 17-year-old lives alone or a 16 and 17-year-old married couple live alone together, the NCHILD, AGEKIDX and AGEKID2 should have values in the child present range.

When we look at the time use patterns of adults, there are some altered social expectations when the relationship between two adults is that one adult is the parent of the other (or one is the child of the other). We also mark these relationships in the value of AGEKIDX=4 and values of 18 and greater for AGEKID2. AGEKIDX=4 and AGEKID2>17 apply only when the relationship between two people in the household is that one is the child of the other. If no people aged less than 18 live in the household and no household member is the child of another household member, then the appropriate codes are, as follows: NCHILD=0 and AGEKIDX and AGEKID2= -7.

NCHILD: Number of children under 18 in household

This variable records the total number of children aged under 18 in the household. The children are not necessarily the diarist's own children. If the diarist is aged <18, nchild should be >0, even if the diarist is married.

This variable is highly comparable across countries, though there are some surveys with limited information about household composition and different age bands (such as the number of children aged <15 or <12). We made adjustments and corrections when possible. Users are asked to consult the README documents for more detailed explanations.

AGEKIDX: Age of youngest child in household (categories including adults)

This variable records grouped information on the age of the youngest child in the household. If no household member is the child of another household member, this variable takes the value -7.

Value	Label
1	Youngest child aged between 0-4
2	Youngest child aged between 5-12
3	Youngest child aged between 13-17
4	Youngest child aged 18+

If the survey has different cut-off points in categories of age of the youngest child, or only report information on the diarist's children rather than children residing in the diarist's household, a note should be recorded in the readme document.

AGEKID2: Age of youngest child in household

This variable records the actual age of the youngest child in the household. If a household member is aged less than 18, then this variable has a positive value (unless the exact age is not known). If no household member is aged less than 18 and no household member is the child of another household member, this variable takes the value -7. In the unlikely event that a child in the household is aged older than 80, the age should be top-coded at 80 – that is the value 80 means 80 or older.

INCORIG: Original household income

This variable records the household income as originally recorded in the surveys. This variable is not harmonised (see INCOME for the harmonised variable).

Note that when merging data from different surveys, the original value labels for this variable will be lost since they are survey-specific. Labels should be recorded in the readme documents.

INCOME: Total household income - grouped

This variable records the annual household income, recoded in quartiles.

Value	Label
1	lowest 25%
2	middle 50%
3	highest 25%

Income often has a high percentage of cases with missing values. Also, in many surveys, data on household income was collected and/or coded in income groups rather than interval values. As a result, the identification of the cut-off points for the first quartile (lowest 25%) and fourth quartile (highest 25%) may not be precise.

OWNHOME: Whether diarist's household owns or rents home

This variable marks whether a diarist's household owns or rents accommodation.

Value	Label
1	Own (outright or on mortgage)
2	Rent
3	Other arrangement

URBAN: Urban or rural household

This variable indicates whether or not the diarist lives in an urban area.

Value	Label
1	Urban/suburban
2	Rural/semi-rural

Survey-specific definition of 'urban' and 'rural' is included in the README file.

COMPUTER: Does household have a computer

This variable indicates whether the diarist's household has a home computer or internet access at home.

Value	Label
0	No
1	Yes

VEHICLE: Does household have a access to a private vehicle

This variable indicates whether the private transport options of the diarist's household. In most developed countries, the question of access to animal is not asked. In urban areas of many developed country, transport by animal may not be permitted. Most people in most developed countries can afford to purchase a bicycle and are able to ride that bicycle if they chose to do so. Most surveys ask whether the household has a car or the number of cars the household owns. A smaller number of surveys ask whether the household owns a bicycle. Often the number of cars and ownership of a bicycle are separate questions. Unless noted in the documentation to the contrary, for most developed countries only options 0, 3 and 4 will apply. Options 1 and 2 are for those countries where such data are collected, generally also where the affordability of any private transport option is not accessible to all households.

Value	Label
0	No
1	Animal only

2	Non-motorised vehicle
3	1 car or motorcycle
4	2+ cars or motorcycles

SEX: Sex

Value	Label
1	Man
2	Woman

AGE: Age

This variable records the age of respondents (up to 3 digits). For surveys in which age was recorded in categories, we recoded age into a continuous variable by assigning the mid-point of each age group (e.g. 17 for age group 15-19). When surveys only included the year of birth of respondents, we computed AGE by subtracting the year of birth from the year of the survey. To protect the anonymity of the oldest diarists, we top-code age at 80 – that is the value 80 means aged 80 or older.

FAMSTAT: Individual level family status

This variable is an individual characteristic, which means that not every member of a household would be coded the same way (in the case of multi-member surveys). It records the presence of children in the household (irrespective of whether those children are the diarist's own children).

Value	Label
0	Adult aged 18 to 39 with no co-resident children <18
1	Adult 18+ living with 1+ co-resident children aged <5
2	Adult 18+ living with 1+ co-resident children 5-17, none <5
3	Adult aged 40+ with no co-resident children <18
4	Respondent aged <18 and living with parent(s)/guardian(s)
5	Respondent aged <18, living arrangement other or unknown

CPHOME: Unmarried child living in parental home

This variable indicates whether or not diarists who are not married or cohabiting live with their parents, regardless of the diarists' age. Note that diarists who are the child of another household member who also are married can be identified using PARNTID1 and PARNTID2.

Value	Label
0	Not a child in parental home
1	Child in parental home

SINGPAR: Whether diarist is a single parent

This variable records whether or not the diarist is a single-parent (a sole parent living with her or his children).

Value	Label
0	No
1	Yes

RELREFP: Relation to household reference person

This variable indicates the relationship of the diarist to the household reference person. In the MTUS, the reference person usually is the person who answered the household questionnaire (generally person identifier 1). In some cases, this may be the person the survey designates as the head of the household.

Value	Label
1	Person 1
2	Spouse/ Common-law partner
3	Child
4	Parent
5	Sibling
6	Son/Daughter-in-law
7	Father/Mother-in-law
8	Brother/Sister-in-law
9	Other Relative
10	Not related

CIVSTAT: Civic status

This variable records the diarist's couple status.

Value	Label
1	Diarist in couple, lives with spouse/partner
2	Diarist not in a couple

This variable is highly comparable across countries apart from the fact that most of the earlier surveys did not include a separate category for 'cohabiting' or 'common-law'. It is not possible to know how people living in such unions declared their marital status. They could have declared themselves as being married or as being single.

COHAB: Respondent is cohabiting

This variable indicates whether or not the diarist is cohabiting or legally married. People not in couples are coded as -7.

Value	Label
-7	Not in a couple
0	Married/civil partnership
1	Cohabiting

CITIZEN: Whether the diarist is a citizen of the country

This variable indicates whether or not the diarist is citizen or national of the country in which she or he completed the diary.

Value	Label
0	No
1	Yes

EMPSTAT: Employment status

This variable has been updated and modified slightly over various incarnations of the of MTUS. The current version differs from the earliest versions of the MTUS in three respects.

- First, in older versions, diarists who said that they were in the military but for whom no hours of work were reported were coded as '3' (other, not employed). Now such diarists are coded as '3' (employed, unknown status). This recoding affected very few surveys and very few cases.
- Second, diarists who said that they were employed but did not declare their full-time or part-time status are coded as '3' (working, hours unknown) rather than missing, as had been the case in earlier versions.
- Third, while previous versions of MTUS defined full-time work as 30 or more hours per week, from in Release 5.2, preference was given to self-declared full-time or part-time status.

This variable reflects attachment to the labour market, and people who are retired, students, seeking work or looking after family but who work at least some hours should be coded as working part time. Category 4 should mean no attachment to the labour force, though when it is not possible to make this distinction, this fact is noted in the readme file for the survey.

Value	Value Label	Description
1	Employed Full Time	Employed/self-employed (including military service), full-time hours
2	Employed Part Time	Employed/self-employed (including military service), part-time hours
3	Employed, unknown status	Employed/self-employed (including military service), hours of work unknown
4	Not in paid work	Other Unemployed, looking for work Retired Homemaker Currently attending school Currently on maternity leave Disability retirement/leave

EMP: In paid work

This variable indicates whether or not the diarist was employed or self-employed (i.e. had a paid job) during the week prior to the survey (or whatever the period of reference was in the original questionnaire). The value 1 here means the diarist should have a value of 1 to 3 for EMPSTAT.

Value	Label
0	Not in paid work
1	In paid work

UNEMP: Unemployed

This variable indicates whether or not the diarist was unemployed during the week prior to the survey (or whatever the period of reference was in the original questionnaire). This variable does not differentiate between respondents who were registered as unemployed, who were not working but available for work and actively seeking work, and who reported themselves to be unemployed. Ideally, when combined with EMPSTAT, this variable should distinguish unemployed people not undertaking any paid work from those with some work time.

Value	Label
0	Not-unemployed
1	Unemployed

STUDENT: Whether diarist is a student

This variable indicates whether or not the diarist was a student. This variable was coded from a question about whether or not the diarist was a student (or was enrolled in school). If such a question was not available in the original survey, use general economic activity status. Ideally, when combined with EMPSTAT, this variable should distinguish working and non-working students.

Value	Label
0	Not a student
1	Student

In surveys where STUDENT is derived from a question about the main activity during the week prior to the survey, students may be miscoded if the survey took place during summer months. For example, a student who is working full-time during summer months and is interviewed during such a month would declare his/her main activity during the week prior to the survey as 'employed' as opposed to 'student'.

RETIRED: Whether diarist has retired

This variable indicates whether or not the diarist had retired. This variable was created from a question about retirement. If the study did not include retirement questions, the receipt of a retirement pension income was used instead. Only when this information was not available was data regarding the diarist's main activity during the week prior to the survey used to compute this variable. Ideally, when combined with EMPSTAT, this variable should distinguish working and non-working retired people.

Value	Label
0	Not retired
1	Retired

EMPSP: Employment status of spouse/partner

This variable records the employment status of the diarist's spouse or partner. Where the survey collected diaries from both people in the couple, each partner's

own self-reported employment status is used to identify the spouse's employment status of her or his partner. Where one partner's employment status is not reported or where only one person in the household completed a diary, we use questions about the employment status of the diarist's spouse during the week prior to the survey (or whatever the period of reference was in the original questionnaire).

Note that if the diarist is not in a couple (CIVSTAT=2), EMPSP is coded as '-7'.

Value	Label
1	Employed full-time
2	Employed part-time
3	Employed, unknown hours
4	Not in paid work

WORKHRS: Hours paid work last week including overtime

This variable records the number of hours of paid work reported during the week prior to the survey including any overtime. Note that the number of hours of paid work during the last week was given priority even if data on the number of hours 'usually worked' was available. If data on the number of paid work last week was not available, then WORKHRS was computed by using usual hours of paid work. When neither question was available, 7-day diaries or work schedules (as used in HETUS) were used to measure hours worked during the diary week. Surveys in which this variable does not represent hours worked last week should be documented in the README documents. The variable includes reported hours of paid work for any diarist who answered the question, whether or not this person reports being employed.

Values of 0 mean that the diarist reported zero hours of paid work. If diarists were not asked the question, they were given a value of -9 or -7 as appropriate. If diarists did not answer the question, they were coded as -8 for this variable.

Where a weekly work schedule or one week diary is available and a particular group of diarists (say people who are unemployed) are not asked for hours of work, use the schedule or the full week of diaries to calculate hours.

EMPINCLM: Original monthly income from employment or self-employment

This variable records the monthly personal income from wages/employment/self-employment during the last month. This variable is not harmonised and is instead recorded in national currency. Note that if data is only available on the personal income from wages/employment/self-employment during the last 12 months, include this variable as presented and add a note the readme file.

Note that when merging data from different surveys, the original value labels for this variable will be lost since they are survey-specific. Labels should be recorded in the readme document.

OCCUP: Occupation

This variable details the diarist's occupation. If the diarist is not presently employed, but there is information on the diarist's most recent occupation, use this information to code occupation.

Value	Label
1	Management (senior management, not supervisors) Code lower-level managers and self-employed professionals or small firm owners in the other codes below, for instance, include SOC codes 1110 and 1999
2	Finance and legal professionals For instance SOC codes 2411-2424; 3516-3541 or 3544
3	Science and engineering professionals For instance SOC codes 2321 or 2111-2209 or 3111-3119, or 3131 or 3132
4	Civil and social service professionals For instance SOC codes 2431-2443 or 3121-3123 or 3231 or 3232 or 3551-3561 or 3563-4099
5	Education and social science professionals For instance SOC codes 2322 or 2311-2319 or 2451 or 2452
6	Medical professionals For instance SOC codes 2211-2309 or 3210-3229
7	Other professionals For instance SOC codes 2329 or 2444 or 2521-2949 or 3311-3519 or 3542 or 3543 or 3562
8	Health, education, and social care support For instance SOC codes 5501-6209 or 9221
9	Clerical and office support For instance SOC codes 4111-5109 or 9211 or 9219
10	Security and armed forces For instance SOC codes 9241-9249
11	Sales, services, creative support, and cleaning For instance SOC codes 5411-6109 or 6141-8109 or 9222-9239 or 9251 or 9259
12	Farming, forestry, and fishing For instance SOC codes 5111-5209 or 8223 or 9111-9119
13	Construction, assembly & repair, moving goods, transport, extraction For instance SOC codes 5211-5409 or 8111-8222 or 8229-8532 or 9121-9209
14	Self-employed non-professionals

SECTOR: Sector of employment

This variable records if employed people work in the public or the private sector.

Value	Label
1	Public sector
2	Private sector

EDUCA: Educational level-original study code

This variable contains the diarists' education level as originally coded in the surveys. This variable is not harmonised. Note that when merging data from different surveys, the original value labels for this variable will be lost since they are survey-specific. Labels should be recorded in the readme document.

EDTRY: Harmonised level of education

This variable contains the harmonised diarists' education level. It is based on the International Classification of Education (ISCED). This variable proved one of the most difficult to harmonise.

Value	Label	ISCED equivalent
1	uncompleted secondary or less	Not completed ISCED level 3
2	completed secondary	Completed ISCED level 3 and/or attendance at level 4
3	above secondary education	ISCED level 5 or above

This variable refers to the diarist's highest level of education completed (in the case of '1' and '2') or attended (in the case of '3').

More information regarding the ISEC classification can be found at:
http://www.unesco.org/education/information/nfsunesco/doc/isced_1997.htm

RUSHED: Whether diarist generally feels rushed

This variable indicates self-reported feelings of time pressure. If the scale includes more categories in the original, make the most logical collapse.

Value	Label
0	Almost never
1	Sometimes
2	Often

HEALTH: Diarist's general health

This variable indicates is drawn from a self-reported general health status.

Value	Label
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0	Poor
1	Fair
2	Good
3	Very good

CARER: Diarist looks after an adult or child with a disability

This variable indicates whether the diarist provides any level of routine care to an adult who needs regular assistance with daily living or looks after a child whose disability or health condition requires more than the standard care a child of that age might typically require.

Value	Label
0	No
1	Yes

DISAB: Diarist has a disability or long-term limiting health condition

This variable indicates whether or not the diarist has a disability or long-term health limiting condition.

Value	Label
0	No
1	Yes

It should be noted that the way disability is defined tends to vary across surveys, which may affect the degree of cross-survey comparability. We attempt to ensure consistency in the coding across time in the same country. Also, where possible, we use health variables and not economic activity status to code this variable (thus allowing users to identify working people with disabilities). When such distinctions are not possible, we add a note in the readme documentation file.

7. 41 activity variables (Versions 1 - 5.53)

The older versions of the MTUS included this harmonised list of aggregated activities. For consistency of research using the MTUS, we retain these original variables.

MTUS Variable Name	Variable Label	MTUS Variable Name	Variable Label
AV 1	Paid work	AV 21	Walking
AV 2	Paid work at home	AV 22	Religious activities
AV 3	Paid work, second job	AV 23	Civic activities
AV 4	School, classes	AV 24	Cinema or theatre
AV 5	Travel to/from work	AV 25	Dances or parties
AV 6	Cook, wash up	AV 26	Social clubs
AV 7	Housework	AV 27	Pubs
AV 8	Odd jobs	AV 28	Restaurants
AV 9	Gardening	AV 29	Visit friends at their homes
AV 10	Shopping	AV 30	Listen to radio
AV 11	Childcare	AV 31	Watch television or video
AV 12	Domestic travel	AV 32	Listen to records, tapes, cds
AV 13	Dress/personal care	AV 33	Study, homework
AV 14	Consume personal services	AV 34	Read books
AV 15	Meals and snacks	AV 35	Read papers, magazines
AV 16	Sleep	AV 36	Relax
AV 17	Free time travel	AV 37	Conversation
AV 18	Excursions	AV 38	Entertain friends at home
AV 19	Active sports participation	AV 39	Knit, sew
AV 20	Passive sports participation	AV 40	Other leisure
		AV 41	Unclassified or missing

We report below details of the 41-activity codes as well as drawing attention to specific interpretative rules that were adopted by the MTUS team.

The default value for all time use variables that can be created is 0. If a category cannot be created, this AV variable should be coded as -9. The value of 0 should indicate that the diarist did not record any time in an activity, though they had the opportunity to report such an activity. In some cases, no diarist in a sample might report a particular activity, even though the survey allowed the possibility for such activity to be recorded. These circumstances could have 0 values for the AV

variable in all cases. Nonetheless, such cases should be possible to distinguish from cases where no diarist had time in that activity coded.

AV1: Paid work

Including such activities as:

Normal work
Unscheduled break at work
Scheduled break at work (eg meal)
Other work-related activities

Notes:

- Any activity done during work hours, but not related to work (i.e. shopping, going to doctor/dentist) should be coded in their respective categories (i.e. shopping, receiving personal services).
- Meal breaks at work or during work hours are to be coded as AV1.
- Courses/studies taken for work during work hours should be coded as AV1. Work-related courses taken in free time should be coded as AV4.
- Farming as the main economic activity should be coded as AV1.
- Unpaid *help* to another business/farm should be coded as AV8. Unpaid *work* for family business/farm should be coded as AV3.
- Any unpaid work away from workplace but not at home (related to main job) or conversations about work but not during work hours should be coded as AV1.
- General work-related variables to be coded as AV1 (i.e. sundry work-related activities, “other” work-related activities).

AV2: Paid work at home

Including such activities as:

Childminding
Running a catalogue
Job seeking paperwork at home
(Other) Job search activities
Other home-working (non-computer)
Other home-working (computer)
Work “brought home” (non-computer)
Work “brought home” (computer)

Notes:

- Any code or code related to “unemployment benefits” or “welfare” should be coded as AV2.
- “Childminding” implies paid child minding.

AV3: Paid work, second job

Including such activities as:

Second, third etc. job (for money)
Other informal economic activity

Notes:

- Any activity (other than the main occupation) done for sale/exchange should be coded here (i.e. hobbies, crafts for sale, car boot or yard sale, sell items on Ebay).
- Any variable implying “help to family business” (paid or unpaid) should be coded here.

AV4: School/classes

Including such activities as:

Educational activities
Lunch break at education establishment
Student at educational establishment
Other educational activities
Night and privately tutored classes for hobbies

Notes:

- Include codes related to work-related courses done in free time
- Include breaks and waiting at school/educational establishment

AV5: Travel to/from work

Including such activities as:

Job seeking activities outside home
Travel to/from work
Education travel
Job search – travel
Other work-related travel

Notes:

- Also includes travel *during* or *for* work/school

AV6: Cook/wash up

Including such activities as:

Food preparation
Baking, freeze foods, make jams/pickles/preserves, dry herbs
Washing up, putting away dishes
Making a cup of tea, coffee, etc.
Set table

Notes:

- None

AV7: Housework

Including such activities as:

Washing clothes, hanging washing out to dry, bringing it in
Ironing clothes
Making, changing beds
Dusting, hovering, vacuum cleaning, general tidying
Outdoor cleaning
Other manual domestic work
Housework elsewhere unspecified
Putting shopping away
“Arrived home”, “went out”

½ of time in

Notes:

- Include all “sundry” or “other” house/domestic work variables

AV8: Other domestic work

Including such activities as:

Repair, upkeep of clothes
Heat and water supply upkeep
DIY, decorating, household repairs
Vehicle maintenance, car washing, etc.
Home paperwork (not computer)
Pet care, care of houseplants
(Other) tasks in and around the home, unspecified
Tasks – unspecified
Feeding and food preparation for dependant adults

Washing, toilet needs of dependant adults
 Shopping for others
 Fetching/carrying for other
 Other care of adults
 Doing housework for someone else (unpaid)
 Care of adults (unspecified)
 Service for animals (eg animals to vet)
 Fetching, picking up, dropping off
 Home paperwork on computer

Notes:

- Include helping/caring for sick/disabled adults (excludes “volunteering” – see AV23).
- Include any *general* care of family (i.e. Italy 1989: AV2411 – “Other family care activities”).
- Include obtaining medical care *for* household adults; also include *self administered* medical care and medical care administered *to* (by respondent) other household adults.
- Include unpaid help to others (i.e. house cleaning; farm help; assistance in correspondence, transportation, etc)
- Include variables such as “dressmaking” or “making clothes” when they are grouped with other “domestic work” variables in the original dataset. This would imply that they are not leisure activities.

AV9: Gardening

Including such activities as:

Gardening

Notes:

- Include any original variables which *combine* “gardening” and “animal care”

AV10: Shopping

Including such activities as:

Everyday shopping, shopping unspecified
 Shopping for durable goods
 Services for upkeep of possessions
 Money services
 Attending jumble sales, bazaars, etc.
 Video rental or return
 Other service organizations or use (e.g. travel agent)

Notes:

- Include all activities where a “maintenance service” is used (i.e. fill up car at petrol station, taking clothes to the cleaners etc)
- Include all activities labelled “other” or “uncodeable” services.
- Include “errands” and “running errands”)

AV11: Childcare

Including such activities as:

Feeding and food preparation for babies and children
 Washing, changing babies and children
 Putting children and babies to bed or getting them up
 Babysitting (i.e. other people’s children)
 Other care of babies
 Medical care of babies and children
 Reading to, or playing with babies and children
 Helping children with homework
 Supervising children

Other care of children
Care of children and babies – unspecified

- Notes:**
- Include “obtaining” medical care for children/babies
 - Include all activities involving/in relation to child care, time spent with children or activities for the purpose of caring for children.
 - “Babysitting” implies unpaid child care.

AV12: Domestic travel

Including such activities as:

Accompanying adult or child (i.e to doctor)
Shopping/services (travel to/from)
Care of others (travel)
Posting a letter

- Notes:**
- Include all travel related to household, care of children, shopping, personal services/care, etc.

AV13: Dress/personal care

Including such activities as:

Personal hygiene and self-care, “dressing”, “got ready to go out”, “got up”, “went to bed”, “put on make-up”, “go to toilet”, “take bath or shower”

½ of time in “Arrived home”, “went out”

- Notes:**
- Include variables such as “personal activities” or “other personal activities” (or any ambiguous or “other” variable that appears in a series of personal activities variables).

AV14: Consume personal services

Including such activities as:

Personal medical, dental, paramedical care
Other personal care/need activity – not specified
Personal services (eg hairdresser)
Other medical services (eg sick note)
Welfare services, counselling
Personal services not elsewhere specified

- Notes:**
- Include *in home* personal medical service
 - Include “other” *professional* services (i.e. lawyer)

AV15: Meals/snacks

Including such activities as:

Eating at home
Drinking

- Notes:**
- Do not include take out food, or meals at restaurants (code as AV33) or eating or drinking in pubs (code as AV27)

AV16: Sleep

Including such activities as:

Main sleep
Short naps and snoozes
Being sick, ill in bed

Notes: ▪ None

Including such activities as:	Going for a drive
	Travel to/from leisure activity
	Travel for religious, political, community, voluntary activity
	Other travel
	Travel – not specified

- ## AV18: Excursions

Notes:

- Include “cultural event” (or related variables)

Including such activities as:

- Outdoor team games
- Non-team ball hitting sports
- Running, jogging, cross-country, track and field
- Golf
- Bowls
- Martial arts
- Swimming and other water sports
- Keep fit, yoga, aerobics, dance practice
- Cycling
- Other outdoor sports
- Other indoor sports
- Horse rides
- Hunting, shooting, fishing, etc.
- Other participation in sport and active leisure activities

- ### AV20: Passive sports participation

Notes: ☐ None

41 activity code frame

Including such activities as: Walks, rambles
Other outdoor hobbies (i.e. painting, collecting mushrooms)

Notes:

- Include general “outdoors” variables

AV22: Religious activities

Including such activities as: Religious practices

Notes:

- Include religious services, religious practices, etc.
- Do not include variables concerning voluntary activities for/with church, church meetings, etc. – code as AV23.
- Do not include social events (i.e. picnic, performances) with church group – code in AV25.
- Include variables simply labelled “religion”.

AV23: Civic activities

Including such activities as: Legal services, dealing with police
Community/political, trade union meetings
Activities as councillors, officials
Voluntary tutoring
Organizing sports/coaching
Providing meals/refreshments
Paperwork associated with voluntary activity
Other voluntary/organizational work
Other political/community activities (eg demonstration)
Other religious, political, community, voluntary activities
Scouts / guides / sea cadets, related civic groups for young people (includes adults who act as leaders)
Filling in time budget diary

Notes:

- Include variables concerning “meetings” (i.e. “church meeting”)

AV24: Cinema or theatre

Including such activities as: Watch films at cinema, other public viewing of recorded material
Going to theatre
Other live entertainment (i.e. concert, opera)
Pop concert

Notes:

- None

AV25: Dances or parties

Including such activities as: At a party/dance
Meeting friends, relatives outside respective homes
Gambling (i.e. at betting shop, casino)
Driving lessons
Other – leisure and entertainment activities out of home
Leisure and entertainment – not specified
“Went dancing” (i.e. disco or dance hall)

Notes:

- Include variables concerning weddings, family gatherings, religious performances, etc.

- Include general out of home “social” variables (i.e. “social away”, “other social activities”).
- Include general entertainment variables (i.e. “other entertainment”).

AV26: Social clubs

Including such activities as:

At a social or night club

Notes:

- None

AV27: Pubs

Including such activities as:

At the pub

Alcohol, tobacco (smoking) and drugs consumption (away from home)

Notes:

- Include variables such as “at a bar” or “drinking at the bar”.

AV28: Restaurants

Including such activities as:

Eating out at restaurants, cafes

Eating out at a fast food or takeaway

Eating out not specified

Eating meal at pub (not snack)

Notes:

- None

AV29: Visit friends at their homes

Including such activities as:

Eating out at a colleague’s, relatives, friend’s house

Visiting relatives

Alcohol, tobacco (smoking) and drugs consumption (at another’s home)

Notes:

- Include variables simply labelled “visiting”

AV30: Listen to radio

Including such activities as:

Listening to radio

Notes:

- None

AV31: Watch TV or video

Including such activities as:

Watching broadcast TV

Watching video tapes and discs

Programming video, rewinding tapes

Notes:

- None

AV32: Listen to records, tapes, cds

Including such activities as:

Listening to tapes, records, etc.

Notes:

- None

AV33: Study, homework**Including such activities as:**Studying
Computer activities (educational, programming)**Notes:**

- Include “reading” for the purposes of education/study activities (i.e. if a general “reading” category is grouped with other study variables, code as AV33).

AV34: Read books**Including such activities as:**

Reading books

Notes:

- None

AV35: Read papers, magazines**Including such activities as:**Reading newspapers, magazines
Reading letters**Notes:**

- Include general “reading” variables if grouped with reading books, reading magazines, etc. (i.e. “reading”, “other reading”, etc)

AV36: Relax**Including such activities as:**Relaxing, puttering around
Sitting in garden, sunbathing
Kissing, cuddling, fondling
Other leisure activities
Leisure – unspecified**Notes:**

- Include general “passive leisure” variables if grouped with passive leisure variables in original list (i.e. “other passive leisure”, “doing nothing”, “other leisure”, etc)

AV37: Conversation**Including such activities as:**Talking, chatting, arguing, discussing
Telephoning**Notes:**

- Include “tantrums”.
- Implies general “leisure” conversations.

AV38: Entertain friends at home**Including such activities as:**Entertaining at home
Alcohol, tobacco (smoking) and drugs consumption (at home)**Notes:**

- None

AV39: Knit, sew**Including such activities as:**

Knitting, sewing, dressmaking

Notes:

- Include only related variables that are part of leisure (i.e. grouped

with other leisure variables); if knitting, sewing, or dressmaking is grouped with “domestic work” types of variables, code as AV8.

AV40: Other leisure

Including such activities as:

Home-brewing, wine making
Watching home movies, slides
“Playing”
Playing video/computer games
Playing games, cards
Artistic and music activities
Hobbies, collections not shown elsewhere
Writing – longhand or typewritten (default)
Writing on word processor

Notes:

- Include ambiguous computer use variables (i.e. “other computer use”)
- Completing the time diary was included in this AV category in older versions of the MTUS, but now is located in AV23

AV41: Unclassified or missing activities

Including such activities as:

Entry missing or undecipherable

Notes:

- None

Older versions of the MTUS also included a condensed 22 activity code list which represents a collapsed version of the 41 categories. This collapsed version has been dropped, though the SPSS syntax to recreate these variables is available on the User Contributions page of the MTUS:

<http://www.timeuse.org/mtus/contributions/>

8. 69 activity variables (Version 5.8)

Some of the 41 codes grouped categories where few minutes of time were recorded, but the nature of these activities differs markedly (particularly in paid work time and odd jobs, the latter of which spans adult care, pet care, DIY and household management). Also, some new activities (computing and computer games) have become prominent since the original MTUS project started. For releases 5.8 and 6, we include a new and expanded list of activity codes alongside the AV codes. Version 5.53 covers only the summary time (total minutes per 24-hour diary) across the 41 AV activity categories. In Version 5.8 we likewise cover summary time in the AV as well as the new MAIN activity lists. In World 6, we code the episode level information for main (AV and MAIN) as well as secondary activities, technology use, mode of transport, and location.

We now detail the codes for the new 69 category main activity list. In the following tables and detailed descriptions. These same codes apply both to the main and the secondary activities. We do not summarise secondary activity in Version 5.8 though. Secondary activity only appears in Version 6.0.

69 activity codes	Description
MAIN/SEC 1	imputed personal or household care
MAIN/SEC 2	sleep and naps
MAIN/SEC 3	imputed sleep
MAIN/SEC 4	wash, dress, care for self
MAIN/SEC 5	meals at work or school
MAIN/SEC 6	other meals or snacks
MAIN/SEC 7	paid work - main job (not at home)
MAIN/SEC 8	paid work at home
MAIN/SEC 9	second or other job not at home
MAIN/SEC 10	unpaid work to generate household income
MAIN/SEC 11	travel as a part of work
MAIN/SEC 12	work breaks
MAIN/SEC 13	other time at workplace
MAIN/SEC 14	look for work
MAIN/SEC 15	regular schooling, education
MAIN/SEC 16	homework
MAIN/SEC 17	leisure/other education or training
MAIN/SEC 18	food preparation, cooking
MAIN/SEC 19	set table, wash/put away dishes
MAIN/SEC 20	cleaning
MAIN/SEC 21	laundry, ironing, clothing repair
MAIN/SEC 22	home/vehicle maintenance/improvement

MAIN/SEC 23	other domestic work
MAIN/SEC 24	purchase goods
MAIN/SEC 25	consume personal care services
MAIN/SEC 26	consume other services
MAIN/SEC 27	pet care (other than walk dog)
MAIN/SEC 28	physical, medical child care
MAIN/SEC 29	teach, help with homework
MAIN/SEC 30	read to, talk or play with child
MAIN/SEC 31	supervise, accompany, other child care
MAIN/SEC 32	adult care
MAIN/SEC 33	voluntary work, civic, organisation activity
MAIN/SEC 34	worship and religious activity
MAIN/SEC 35	general out-of-home leisure
MAIN/SEC 36	attend sporting event
MAIN/SEC 37	cinema, theatre, opera, concert
MAIN/SEC 38	other public event, venue
MAIN/SEC 39	restaurant, café, bar, pub
MAIN/SEC 40	party, reception, social event, gambling
MAIN/SEC 41	imputed time away from home
MAIN/SEC 42	general sport or exercise
MAIN/SEC 43	walking
MAIN/SEC 44	cycling
MAIN/SEC 45	other out-of-doors recreation
MAIN/SEC 46	gardening/forage (eg pick mushrooms), hunt/fish
MAIN/SEC 47	walk dogs
MAIN/SEC 48	receive or visit friends
MAIN/SEC 49	conversation (in person, phone)
MAIN/SEC 50	other in-home social, games
MAIN/SEC 51	general indoor leisure
MAIN/SEC 52	artistic or musical activity
MAIN/SEC 53	written correspondence
MAIN/SEC 54	knit, crafts or hobbies
MAIN/SEC 55	relax, think, do nothing
MAIN/SEC 56	read
MAIN/SEC 57	listen to music, ipod, CD, audio book
MAIN/SEC 58	listen to radio
MAIN/SEC 59	watch TV, DVD, video
MAIN/SEC 60	play computer games
MAIN/SEC 61	send e-mail, surf internet, computing
MAIN/SEC 62	no activity but mode of recorded travel
MAIN/SEC 63	travel to or from work
MAIN/SEC 64	education-related travel
MAIN/SEC 65	travel for voluntary/civic/religious activity
MAIN/SEC 66	child/adult care-related travel

MAIN/SEC 67	travel for shopping, personal or household care
MAIN/SEC 68	travelling for other purposes
MAIN/SEC 69	no recorded activity
SPPART	time with spouse or partner

Mapping the old to the new MTUS codes

AV	MAIN	Notes on changes and similarities
AV1	Main5 Main7 Main10 Main12 Main13	eating at work, work breaks, other time at the workplace separated out from paid work. Main7 covers most activity included in AV1
AV2	Main8 Main14	paid work at home separated from job search activities
AV3	Main9	second job – equivalent categories
AV4	Main5 Main15 Main17	eating at school, and leisure classes separated out from main education. Main14 covers most time that was in AV4
AV5	Main11 Main63 Main64	travel to/from work, travel as a part of paid work, education-related travel separated out from work-related travel
AV6	Main18 Main19	food preparation and cooking separated from setting and clearing table/wash dishes home brewing, wine making moved from leisure to food preparation in new code
AV7	Main20 Main21	cleaning separated from laundry/clothing care
AV8	Main22 Main23 Main27 Main32	home/vehicle maintenance, other domestic work, pet care, adult care separated out from old odd jobs category. Also, informal assistance to people outside the household moved to the voluntary activity category (Main33 rather than AV8), and help to another person that involves child or adult care moved from Av8 to the respective child care or adult care code in the Main scheme.
AV9	Main46	gardening – mostly equivalent categories, except that foraging (ie collecting mushrooms) was formerly in walking category – AV21, and hunting & fishing was formerly in AV19 – sport
AV10	Main24 Main26	shopping for goods separated from using services – ie bank, post office
AV11	Main28 Main29 Main30 Main31	physical/medical child care, teach or help with homework, read to and play with child, and supervise or other childcare distinguished. Also note that AV11 only covers child care of household children, childcare as help had been coded in AV8. In the new code, all child care,

		whether for a household child or as help to someone else is coded in the Main28 to 32 codes
AV12	Main66 Main67	child and adult care-related travel separated from shopping and services travel
AV13	Main1 Main4	imputed personal and household care added to personal care
AV14	Main25	personal services – equivalent category except that personal medical care at home now is included in personal care
AV15	Main6	meals & snacks – equivalent categories
AV16	Main2 Main3	recorded sleep and naps, imputed sleep
AV17	Main62 Main65 Main68	no activity but mode of travel reported, voluntary and civic activity travel distinguished from leisure travel
AV18	Main35 Main38 Main45	general out of home leisure, attending event, other outdoor recreation distinguished
AV19	Main42 Main44	cycling distinguished from other exercise and sport
AV20	Main36	attend sporting event – equivalent code
AV21	Main43 Main47	dog walking (which sometimes was lumped with AV8) separated from other walking
AV22	Main34	religious activities – equivalent categories
AV23	Main33	voluntary/civic/organisational – note a change; the old MTUS coded only formal volunteering for an organisation in AV23, Main33 covers both formal organisational volunteering and informal unpaid assistance to a person outside the household – the informal volunteering had been coded in AV8.
AV24	Main37	cinema, theatre, concert – equivalent activities
AV25 AV26	Main40 Main41	social clubs grouped with dances, receptions, parties; other social and imputed events away from home added that previously would have been in missing time
AV27 AV28	Main39	restaurants, bars, pubs combined
AV29 AV38	Main48 Main50	receive and visit friends combined – distinguishable by location code, imputed in-home social code also added to these categories
AV30	Main58	listen to radio – equivalent categories
AV31	Main59	watch TV/DVD – equivalent categories
AV32	Main57	listen to CDs, music – equivalent categories
AV33	Main16	study, homework – equivalent categories
AV34 AV35	Main56	reading books combined with other reading

MAIN5 / SEC5 : Meals at work or school

Including such activities as:

Meals at work or school – if not a separate activity, may need to use the location codes for activity eating and location canteen or lunch room at school or work

Notes:

- None

MAIN6 / SEC6 : Other meals or snacks

Including such activities as:

Eating or drinking, but not eating at work or school, and not eating or drinking out in a restaurant, café, pub, or bar

Notes:

- Meals in venues where someone was not likely to have paid for the meal or to have paid more than a nominal contribution (meal at church) go into this category.
- If eating and drinking is not broken down to distinguish eating or drinking at work, eating out, and other eating, use the location information to distinguish this category from meals at work/school and from meals eaten out.

MAIN7 / SEC7 : Paid work – main job (not at home)

Including such activities as:

Paid work for the main job (or unspecified paid work) that does not take place at home

Notes:

- Any activity done during work hours, but not related to work (i.e. shopping, going to doctor/dentist) should be coded in their respective categories (i.e. shopping, receiving personal services).
- Courses/studies taken for work during work hours should be coded as MAIN / SEC 7. Work-related courses taken in free time should be coded as MAIN / SEC 17.
- Farming as the main economic activity should be coded as MAIN / SEC 7.
- Unpaid *help* to another business/farm should be coded as MAIN / SEC 33. Unpaid *work* for family business/farm should be coded as MAIN / SEC 9.
- Any unpaid work away from workplace but not at home (related to main job) or conversations about work but not during work hours should be coded as MAIN / SEC 7.
- General work-related variables to be coded as MAIN / SEC 7 (i.e. sundry work-related activities, “other” work-related activities).

MAIN8 / SEC8 : Paid work at home

Including such activities as:

Paid work for main or second job (or unspecified paid work) that takes place at home

Notes:

- Includes paid childminding at home.
- Includes running a catalogue round (ie Avon).
- Includes work brought home.

MAIN9 / SEC9 : Second or other job (not at home)

Including such

Paid work for a second, third, small hours job that does not take

activities as: place at home
Busking or other performance for money

Notes:

- This is paid work or work that involves regular hours and working conditions (such as unpaid work in a family business)

MAIN10 / SEC10 : Unpaid work to generate household income

Including such activities as: Any activity designed to contribute to household income which is neither is done for pay nor involves regular schedules or conditions that were a business not a family enterprise otherwise would be salaried income. This activity involves tasks preparing items that could be sold later to generate income, such as preparing home garden produce for sale/trade, or hobbies or crafts designed to make items to sell/trade. This is activity where return to the household has no necessary association with the time committed to the activity.

Notes:

- Includes other informal economic activity, such as a yard or car boot sale, sell items on E-bay.

MAIN11 / SEC11 : Travel as a part of paid work

Including such activities as: Bus / taxi / train driver driving, pilot flying etc. as part of job
Travelling to a meeting or conference for work, or on the road as a sales rep or delivery driver, etc.

Notes:

- This activity covers travelling during paid time, not commuting to work

MAIN12 / SEC12 : Work breaks

Including such activities as: Scheduled work breaks, coffee breaks at work, cigarette breaks at work

Notes:

- None

MAIN13 / SEC13 : Other time at workplace

Including such activities as: Waiting for repair, wait for workplace to open, wait for someone else to finish at workplace

Notes:

- Time at the workplace which is not part of work time and not part of a voluntary or union activity and not coded in another activity elsewhere (not education or personal care etc)

MAIN14 / SEC14 : Look for work

Including such activities as: Job search activities
Attend interview
Activities related to claiming unemployment benefits or welfare

Notes:

- None

MAIN15 / SEC15 : Regular schooling or education

Including such activities as: Classes, lectures, tutorials

Notes:

- Includes lectures watched on-line, on-line or teleconferenced tutorials, watching lecture that is part of a formal course on television

MAIN16 / SEC16 : Homework

Including such activities as: Homework, including at the library for study, as well as preparing for an exam or other education project

Notes:

- None

MAIN17 / SEC17 : Leisure / other education or training

Including such activities as: Leisure courses
Interview or audition for a place on a course
Course for general interest but not for a qualification (take singing or language lessons)
Take short course for employment related qualification which is not a part of a job (ie take course on own time to improve chances for future employment or change of employment)

Notes:

- Includes any activity done for a formal course or qualification not during class or tutorial time or not at school, such as shopping form items for a course

MAIN18 / SEC18 : Food preparation, cooking

Including such activities as: Any preparation of food or drink, including making jams / preserves, canning or pickling food for long-term preservation
Home brewing, wine making

Notes:

- Not done for pay

MAIN19 / SEC19 : Set table / wash or put away dishes

Including such activities as: Set table, lay out dishes
Clean up from meal, wash or put away dishes
Load or unload dishwasher

Notes:

- Not done for pay

MAIN20 / SEC20 : Cleaning

Including such activities as: Straightening, tidying, routine cleaning
Clean car
Routine cleaning of grounds (chemicals in pool, rake leaves, sweep patio or pavement) that is not gardening

Notes:

- Not done for pay

- Does not include activities related to repairs or redecoration, cleaning brushes after repainting a room or repairing the engine of a car should be coded in MAIN / SEC 22
- Does not include cleaning related to food preparation or cleaning and repair of clothing and textiles (MAIN / SEC 21)

MAIN21 / SEC21 : Laundry, Ironing, Clothing Repair

Including such activities as: Laundry, hang clothes on the line
Put clothes away
Repair clothes or other textiles

- Notes:**
- Not done for pay
 - Does not include making clothes or textiles for gifts or as a hobby (MAIN / SEC 54)
 - Does not include making clothes or gifts for sale (MAIN / SEC 10)

MAIN22 / SEC22 : Home / vehicle maintenance / improvement

Including such activities as: Painting, decorating, landscaping
Repair car or furniture
Tend domestic animals / livestock, - code care of pets, disability assistance animals, horses, or working dogs in MAIN / SEC 27)
Collect fuel or water
Forage for building materials (thatch, stone or wood etc)

- Notes:**
- Not done for pay
 - If done as a favour to someone else on someone else's property, code as MAIN / SEC 33

MAIN23 / SEC23 : Other domestic work

Including such activities as: Household management, accounting, pay bills
Paperwork / household computing

- Notes:**
- Not done for pay
 - Include any general unspecified housework here

MAIN24 / SEC24 : Purchase goods

Including such activities as: Grocery / routine shopping
Purchase household goods, personal items (clothes, jewellery, mobile phone, ipod etc.)
Purchase house, car, other high value items
Purchase access to leisure (buy tickets, buy gym / zoo / museum etc. membership)
Window shopping

- Notes:**
- Include goods bought in stores, over the internet, while browsing car boot or yard sales
 - Include research to inform a purchase

MAIN25 / SEC25 : Consume personal care services

Including such activities as:

Hair dresser, barber, beautician, manicure
Medical / dental care, rehabilitation, physiotherapy
Psychological care, counselling
Alternative therapy, massage
Outing to spa

Notes:

- Include general personal services, and services received at home
- Include services provided to the diarist by charities, voluntary organisations, as informal help from another household, or as part of government services
- Yoga, Tai Chi and related exercise should go into MAIN / SEC 42

MAIN26 / SEC26 : Consume other services

Including such activities as:

Pay for or arrange personal (ie groomer) or medical services for a pet, domestic animal, or another household member
Legal, accounting, banking, postal services
Dry cleaning, laundry or ironing service, arrange / pay for / manage domestic help
Arrange / pay for child care, pet care, adult care

Notes:

- Include any services for which the diarist pays or someone pays for or donates on behalf of the diarist
- Include services to the household provided to the diarist's household by charities, voluntary organisations, as informal help from another household, or as part of government services

MAIN27 / SEC27 : Pet care (other than walk dog)

Including such activities as:

Look after, groom, feed, provide medical care to a pet
Train, teach, work with pet, working dog, horse, assistance animal
General pet care

Notes:

- Walking dogs (or taking other pets for a walk) go in MAIN / SEC 47
- General pet care with the mode of transport "walking" should go into MAIN / SEC 47
- Riding horses goes into MAIN / SEC 42

MAIN28 / SEC28 : Physical or medical care of child

Including such activities as:

Feeding young child, breastfeeding
Bathing, changing nappy (diaper), toilet training
Helping child dress, learn to walk
Providing medical care to child

Notes:

- Include general or unspecified child care here
- Unpaid child care only, if paid to provide this care, code in MAIN / SEC 8 or 9
- Include child care done as help to a family member, friend or neighbour

MAIN29 / SEC29 : Teach child, help with homework

Including such activities as:

Help with homework
Show child how to do something, teach child

Notes:

- Unpaid child care only, if paid to provide this care, code in MAIN / SEC 8 or 9
- Include child care done as help to a family member, friend or neighbour

MAIN30 / SEC30 : Read to, talk to, play with child

Including such activities as:

Read to child or read with child
Conversation with child
Play (inside or outside) with child

Notes:

- Unpaid child care only, if paid to provide this care, code in MAIN / SEC 8 or 9
- Include child care done as help to a family member, friend or neighbour

MAIN31 / SEC31 : Supervise, accompany, other child care

Including such activities as:

Keep an eye on, accompany child
Parent / teacher meetings, filling in permission forms for child to attend event
Other specified child care

Notes:

- Unpaid child care only, if paid to provide this care, code in MAIN / SEC 8 or 9
- Include child care done as help to a family member, friend or neighbour

MAIN32 / SEC32 : Adult care

Including such activities as:

Help adult get up/go to bed, get dressed, bathe
Supervise, keep an eye on adults not able to look after themselves
Accompany adults (take shopping when they cannot do this without assistance, help them get around at an event)
Help with taking medication, help with special meals
Help with filling out forms, correspondence, making calls

Notes:

- Include care to a child with a disability which is related to the disability and not an element of standard child care here
- Unpaid adult care only, if paid to provide this care, code in MAIN / SEC 8 or 9
- Include adult care done as help to a family member, friend or neighbour, whether or not the care recipient lives in the same household as the diarist

MAIN33 / SEC33 : Voluntary work, civic organisation activity

Including such activities as:

Vote, attend public or community meeting, deal with police
Formal voluntary work for an organisation
Informal help to community or other household

Unpaid work for union, ideological / religious / hobby or interest group
 Attend demonstration
 Scouts / guides / sea cadets, other civic activity for young people (includes adults who act as leaders)
 Fill in time use diary, participate in other social science study

- Notes:**
- Include activities related to meetings, promotions and fundraising for an agency that is not an employer
 - Voluntary care of children or adults should be coded in MAIN / SEC 28 to 32

MAIN34 / SEC34 : Worship and religious activity

Including such activities as: Attend formal services at a place of worship
 Pray alone or with others, meditate, spiritual activity
 Read sacred text, religious study

- Notes:**
- Any fundraising, meetings, collective efforts to repair, restore or improve part of a sacred site should be coded in MAIN / SEC 33
 - Picnics or informal meals at a religious establishment go into MAIN / SEC 6; a wedding reception and the like go into MAIN / SEC 40
 - Include yoga here if recorded as for religious purposes, but if yoga not explicitly recorded as a religious event, code in MAIN / SEC 42

MAIN35 / SEC35 : General out-of-home leisure

Including such activities as: Unspecified or other specified leisure away from home

- Notes:**
- None

MAIN36 / SEC36 : Attend sporting event

Including such activities as: Attend sporting match or games
 Watch sport in social context (with friends, at sports bar)

- Notes:**
- None

MAIN37 / SEC37 : Cinema, theatre, opera, concert

Including such activities as: Any specified public performance

- Notes:**
- None

MAIN38 / SEC38 : Other public event

Including such activities as: Museum, art exhibition, watch public demonstration or parade
 Visit historic site, garden, zoo, take bus or walking tour
 Fair, exhibits and amusement rides at a rodeo or circus (also unspecified rodeo or circus)
 Go to library (not for study)

- Notes:**
- If watching the competition at a rodeo, code in MAIN / SEC 36
 - If watching the main performance of a circus, code as MAIN / SEC 37

MAIN39 / SEC39 : Restaurant, café, bar, pub

Including such activities as: Go out for meal or drink

- Notes:**
- If working at restaurant, pub, café, bar, code in MAIN / SEC 7 or 9
 - If special event like party or wedding reception, code in MAIN / SEC 40

MAIN40 / SEC40 : Party, reception, social event, gambling

Including such activities as: Event for large number of people at home
Event for multiple people away from diarist's or other's home

- Notes:**
- Events for one or a few people at the diarists or another's home go into MAIN / SEC 48
 - Include go out dancing

MAIN41 / SEC41 : Imputed time away from home

Including such activities as: No activity recorded, but location is not at home

- Notes:**
- None

MAIN42 / SEC42 : General sport or exercise

Including such activities as: Any specified sport or exercise (leisure physical activity)
Apart from walking, cycling, gardening, hunting & fishing

- Notes:**
- If walking or cycling grouped with other exercise, code here

MAIN43 / SEC43 : Walking (not walk dogs)

Including such activities as: Activity recorded as walking (for pleasure or as transport)
Hiking, fell walking
No activity recorded but more of transport "walking" or "on foot" recorded

- Notes:**
- If main activity is transport and the mode of transport is walking and no secondary activity, code the secondary activity as walking

MAIN44 / SEC44 : Cycling

Including such activities as: Activity recorded as cycling (for pleasure or as transport)
No activity recorded but mode of transport "cycling" recorded

- Notes:**
- If main activity is transport and the mode of transport is cycling and no secondary activity, code the secondary activity as cycling

MAIN45 / SEC45 : Other out-of-doors recreation

Including such activities as:	Camping, at the beach, caravanning Day trip countryside Children playing outside in child diaries
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Notes: ▪ None

MAIN46 / SEC46 : Gardening / forage, hunt/fish

Including such activities as:	Gardening (ornamental or to produce flowers or food for the home)
	Pick mushrooms, gather pine cones, truffles, wild flowers etc.
	Hunting or fishing

Notes:

- Gardening or hunting to produce good to sell later should go into MAIN / SEC 10
- Not as part of a paid job

MAIN47 / SEC47 : Walk dogs (or other animals)

Including such activities as:	Walk dog
	General pet care, mode of transport reported as walking

Notes: ▪ None

MAIN48 / SEC48 : Receive or visit friends

Including such activities as:	Social occasion with people from another household in the diarist's or another's home
	General visit friends, have guests
	Meal, alcohol, tobacco with guests at own or another's home

Notes: ▪ None

MAIN49 / SEC49 : Conversation

Including such activities as:	Talk with other household members
	Talk with people from other households outside own or other's home
	Phone call

Notes:

- Includes calls on mobile phones, Skype

MAIN50 / SEC50 : Other in-home social, games

Including such activities as:	Social activities with household members or others
	Games of skill (including solitaire)

Notes: ■ None

MAIN51 / SEC51 : General indoor leisure

Including such	Unspecified or general indoor leisure
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activities as: Children playing inside in child diaries

Notes:

- None

MAIN52 / SEC52 : Artistic or musical activity

Including such activities as: Paint or other art, compose music, play an instrument

Notes:

- Not for pay or to produce goods for sale

MAIN53 / SEC53 : Written correspondence

Including such activities as: Fill in forms, write poetry, prose, scripts, diaries, letters (not on the computer)

Notes:

- Do not include paid activity, care, study or household management activity

MAIN54 / SEC54 : Knit, crafts, hobbies

Including such activities as: Knit, crafts, hobbies

Notes:

- Meetings or events with groups with similar interests go into MAIN / SEC 33
- If producing goods for sale, put in MAIN / SEC 10

MAIN55 / SEC55 : Relax, think do nothing

Including such activities as: Just relax, think
Do nothing

Notes:

- None

MAIN56 / SEC56 : Read

Including such activities as: Read (books, papers, magazines, or related materials)

Notes:

- Do not include reading as a part of paid work or education and study

MAIN57 / SEC57 : Listen to music, audio book

Including such activities as: Listen to records, tapes, CDs, ipod
Listen to audio books or other recorded material

Notes:

- Do not include listening as a part of paid work or education and study

MAIN58 / SEC58 : Listen radio

Including such Listen to radio

Notes:

- Include listening to radio over internet or mobile phone

Including such activities as: Watch TV, video, DVD, video on demand

- MAIN60 / SEC60 : Play computer games**

Notes: ▪ None

<p>Including such activities as:</p>	<p>Includes on-line chat room</p>
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- MAIN62 / SEC62 : No activity but mode of recorded travel**

Notes: ▪ None

Including such activities as:	Commuting, including travel to or from job interview or job search
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- MAIN64 / SEC64 : Education-related travel**

Notes: ■ None

Including such activities as: Travel to or from location for voluntary, civic or religious activity

- None

MAIN66 / SEC66 : Child or adult care travel

Including such activities as:	Take child to school/day care / pick up from school / day care
	Take child or adult shopping, to event or appointment

- None

MAIN67 / SEC67 : Travel for shopping, personal or household care

Including such activities as:	Travel to or from shops or services
	Travel to run errands

- None

MAIN68 / SEC68 : Travel for other purposes

Including such activities as:	Travel to or from leisure activities Drive, ride train for fun, go for drive
--------------------------------------	---

- Include travel with no specified purpose here

MAIN69 / SEC69 : No recorded activity

Including such activities as: No entry, also incomplete, undecipherable or nonsense entry

- No mode of transport recorded and location either at home or at unknown location

SPPART – Time with spouse or partner

The final variable in Version 5.8 is a summary of total time in the diary (minutes in the 24-hour period) recorded with the diarist's spouse or partner. For surveys where who else is present or time with the spouse or partner is not available, this variable should be set to -9. If the diarist is not married and does not have a cohabiting partner, then this variable is coded as -7. Otherwise, the variable is coded as the sum of minutes reported as spent with the spouse or partner.

9. Version 6.0 variables

In contrast to Versions 5.3 and 5.8, where the row cases represent 24-hour diaries, in the sequence files in Version 6.0, the row cases represent a change in episode (a change in the main activity, secondary activity or location from the previous record in the diary).

As this file contains many more row cases and complex variables, this file is best treated as a database rather than an end use file. Users should note that a particular “activity” in which they have interest may be defined by a number of elements. For some research purposes, social activity using ICTs when the diarist is not physically with other people will need to be distinguished from social activity involving ICTs where other people are present, as well as from social activity where the other people present comprise all parties to the social interaction. Likewise, for some research purposes, activities that entail greater exposure to sunlight will need to be distinguished from activities with less exposure or no exposure, and making this identification will require the combination of the main and secondary activity codes, the inside or outside variable, and the time of day (matched with data on when sunrise and sunset took place in that location).

Consequently, the Version 6 file is organised on two basic principles. We include a limited range of background variables in this Version, both for the convenience of the converters as they check their work and for the convenience of users, who may wish to test how well their extraction of a particular concept has worked. The majority of variables about the survey, diarist, and diarist’s household are available only in Versions 5.53 and 5.8. Users of the World 6.0 files need to decide how to extract their concept, then match variables they make from the episode data back into Version 5.8 or 5.53 to then conduct analysis using the wider range of variables.

All the identifiers to allow this match appear in Version 6.0. These variables also should appear in the order shown below in the file. As these variables already have been described in this document (Section 6 page 8), we do not elaborate more here.

- countrya – country or region of study
- survey – year the survey began
- swave – longitudinal study wave marker
- msamp – multiple samples using the same diary instrument
- hldid – household identifier
- persid – person / diarist identifier
- id – diary identifier (multiple values for surveys with more than 1 diary)

Likewise, we include the basic details of the diary and the diarist (we fully describe all but one of these variables in Section 6 starting on page 11). This list of variables follows the identifiers in the following order:

- day – day of week diary kept
- cday – calendar day diary kept
- month – month diary kept
- year – year diary kept
- diary – diary order (1 when 1 diary per participant)
- badcase – marker of low-quality cases
- sex – sex of diarist
- age – age of diarist.

CDAY: Calendar day diary kept

The sole variable not in the other versions is **CDAY**. This variable takes a value between 1 and 31 where the information has been released, or -9 if the information is not available. This variable appears here partly to allow matching of additional information relevant to specific days (weather conditions, sunrise and sunset on the diary day, whether the diary took place before or after a major event), and partly to allow testing of potential minor variations in activities across months (for instance closer or further away from when most people get paid).

TIME VARIABLES

Version 6.0 then includes 14 variables not in previous versions that are episode-specific. The first five of these variables report the time of the episode.

TIME: Duration of activity in minutes

We calculate this variable by subtracting START from END. Many surveys include a variable for the duration of the episode in minutes, though some files include errors in the variable, and in some cases, described in more detail in relation to the activity variables below, the CTUR team modified the definition of an episode. Consequently, while people converting original surveys into MTUS format should double check their calculation for time against the duration variable in the original file and carefully check any inconsistencies, the variable time should be the variable calculated by the converter of the survey.

CLOCKST: Start time on 24-hour clock

This variable represents the time on the 24-hour clock when the episode started. We report this variable as a 4-digit number. The digit(s) prior to the decimal represent the hour; the two digits following the decimal represent the minute.

6.35	(thirty five minute past 6AM)
18.05	(five minutes past 6PM)

We represent midnight as 0.00.

START: Start minute

END: End minute

There are two ways to represent time in the diary episode file: time as reported on the 24-hour clock, and time in terms of the number of minutes which have elapsed since the start of the diary observation period. A 24-hour file contains 1440 minutes - except on those days where an adjustment of an extra minute is added to the day to adjust for minor variations in the actual rotation speed of the Earth around the sun (though users should note that very few diaries are collected on such days, partly as few of such days appear in the sampled periods and partly as few participants have been willing to keep a time diary on New Year's Eve when such adjustments are added.) The addition or absence of the additional 60 seconds makes little difference to population behaviour patterns, so this dataset makes no attempt to account for these adjustments.

All the surveys included in the MTUS cover an observation period of 24 hours (1440 minutes), and all surveys begin at a point on the 24-hour clock where the majority of the observed population was asleep. There is considerable variability about the start-time on the 24-hour clock, both in the sense that the start time of the diaries varies from midnight to 6:00, and that the time when the diarists in different surveys (as well as in the same survey in the case of countries that span multiple time zones) start their diary in relation to Greenwich Mean Time. As people lead their lives in 24-hour cycles, we harmonise the concept of time in Version 6 by reporting the start and end minutes of the episode in the 1440 minute observation period. The first episode in all diaries has a start value of 1, and the last episode in all diaries has an end value of 1440.

Some surveys report time in this format, and for these cases, we copy the start and end minutes into the MTUS variables. For cases where data presents time files in an episode format, but the only time variables are the calendar start and end time of the episode:

$$\begin{aligned}\text{start}(n+1) &= \text{start}(n) + \text{duration}(n) \\ \text{start}(n+1) &= \text{end}(n) \\ \text{end}(n+1) &= \text{start}(n+1) + \text{duration}(n+1)\end{aligned}$$

For surveys which collect activity information in fixed time slots, where:

sd = time slot duration in minutes (a constant in most cases)
es = number of time slots which elapse to next episode

$$\begin{aligned}\text{start}(n+1) &= \text{start}(n) + \text{sd} * \text{es}(n) \\ \text{start}(n+1) &= \text{end}(n) \\ \text{end}(n+1) &= \text{start}(n+1) + \text{sd} * \text{es}(n+1)\end{aligned}$$

Thus, is the case of Harmonised European Time Use Study surveys, if a person starts an episode of eating lunch at 12:00 and finishes eating at 12:40 (and the diary survey began at the recommended clock start time of 04:00):

```
start(n)=480  
end(n)=520  
start(n+1)=520  
end(n+1)=520 + 10*es
```

EPNUM: Episode number

This variable is the identifier of the episode. The first episode has a value of 1.

$\text{Episode}(n+1) = \text{epnum}(n)+1$.

This episode number should be generated after the activity and ancillary variables have been created. As the next page explains, some elements of the MTUS processing can produce different numbers of episodes compared to the original data. The MTUS variable EPNUM needs to reflect the number of episodes in the MTUS version of the file.

ACTIVITY VARIABLES

MAIN: Main activity (69 category list)

SEC: Secondary activity (69 category list)

AV: Main activity (41 category list)

These three variables mirror the MAIN1 to MAIN69 and AV1 to AV41 variables in Version 5.8. MAIN covers the main activity codes in the 69 category list of categories. SEC covers secondary activity using the same category list as MAIN. AV covers the main activity codes in the original 41 category list of categories. A code of “33” in MAIN means the diarist performed voluntary work or a civic activity in that time slot (and this time would be summed in MAIN33 for the diary day). The labels of the values in the AV and MAIN activity lists appear in the previous two sections (pp. 28; 38-9).

In some diary surveys, diarists were able to report more than one secondary activity. Where this occurs (UK 1987), we split the episode into sub-episodes that total to the same length of the original episode, one new episode for each reported secondary activity. In these cases, we coded the main activity and context information as applying across all elements of the split episode, except where there is a clear transition to travel. Users can identify these cases as these sub episodes have the same value for the variable clockst, while all unsplit episodes have different values for clockst (the start time of the episode on the clock).

In cases where diarists record only one activity, but where we also can identify missing travel records (the diarist starts in one place and ends up in another place with no recorded travel), we code the secondary activity as imputed travel. For cases where we identify missing eating or drinking (the diarist records working with food (food preparation or set/clear table) but never reports eating or drinking, or the diarist records social activity at an event where other household members classify the activity as eating, if there is no secondary eating, we add eating as a secondary activity.

As already noted in the first section on the preparation of the data on page 2, CTUR has a number of conventions for filling in other instances where the diarist fills in some elements of the diary but not others yet has provided sufficient information to reveal the sequence of her or his activities in the gap. These cases of filling in information may result in additional episodes appearing in MTUS versions of the data that were not apparent in the original release of the data.

Some surveys collected activities in half-hour time slots. Such long observation periods will include multiple episodes on occasion. In particular, short travel episodes can be left out of the half hour slots. In the case of missing short travel in these 30-minute time slot surveys, as well as in cases where the diarist coded one activity as the main activity and travel as the secondary activity, we code 20 minutes of the 30 minute slot as the main activity, and 10 minutes as travel. The placement of the 10 minutes of travel depends on the sequence in which the time slot occurs. If a diarist has been working at the office for 7 hours, then has a time slot with missing or secondary travel where the main activity is recorded as paid work, then in the next episode is doing activities at home, we code the first 20 minutes of the episode that includes travel and the last 10 minutes as secondary travel. In contrast, if after seven hours of paid work, the diarist then records an episode of eating at a restaurant with secondary travel, and the next time slot is a continuation of eating out, then we code the first ten minutes of the time slot with the short travel episode imbedded as travel and the second 20 minutes as eating out in the restaurant.

This procedure increases the number of episodes in the MTUS version of the data as compared to the original data. For this reason, the episode number and start and stop minute of episodes need to be calculated after the activity and ancillary variables have been constructed.

LOCATION VARIABLES

INOUT: Inside or outside

ELOC: Location

Location variables	Description
INOUT = -8	location unknown

INOUT = 1	inside
INOUT = 2	outside
INOUT = 3	in a vehicle
ELOC = -8	location unknown
ELOC = 1	at own home
ELOC = 2	at another's home
ELOC = 3	at workplace
ELOC = 4	at school
ELOC = 5	at services or shops
ELOC = 6	at restaurant, café, bar, pub
ELOC = 7	at place of worship
ELOC = 8	travelling
ELOC = 9	other locations

Location codes are drawn both from location codes as well as imbedded information in the activity code.

The INOUT variable is best coded by a process of elimination. First, any activity where there is a vehicle recorded as a mode of transport is coded as 3 (travelling). Next, use original location codes to identify locations that are outside (in the yard of own home, at the beach or countryside, children's play area, and the like). For remaining activities, use imbedded code information to code outside (for instance clean yard, outdoor cleaning, play with child outside). Walking and cycling for transport and most walking and cycling as sport takes place outside.

Users should note that the degree of specification about whether an activity is inside or outside is highly variable by survey, and caution should be used with this variable for cross-country and cross-time analysis.

Coders next need to look for clear-cut cases of activities that happen inside in the original location codes. Then look for explicit inside codes in the original code frame (indoor cleaning, indoor sports etc.). Finally, remaining activity most likely to have happened inside (sleep, personal care) should be coded as inside. Any remaining activity should be coded as location unknown.

Coding of ELOC should begin from original location codes. Once the potential of the original location codes is exhausted, the coder then should turn to imbedded locations in the original activity code frame (work at home, eat in restaurant, receive friends at home and the like) to fill in gaps. Any inconsistency between the original location codes and the locations imbedded activity codes should be checked, and a comment made in the conversion programme. Activity codes then can be used to break down "other" locations. As examples, if there is no code for school, but the activity is formal schooling and the location is away from home, it is reasonable to infer that the location is school. Similarly, if the activity is attend religious service and the location is other not at home, this location

reasonably can be inferred to be at a place of worship. If the diarist was travelling (including on foot and by bicycle), then ELOC should have the value 8.

Note that coders should **use original, NOT MTUS** codes to construct the INOUT and ELOC variables.

OTHER VARIABLES

ICT: Used Information Communication Technology during activity

We include a marker of whether the diarist used one or more ICTs during the activity. In some recent surveys, the diary included a column marking whether the diarist used ICTs. If such a column is available, then we use this column to create this 0/1 marker variable. In many cases, however, we can only identify this information from the activity code list. The HETUS surveys, for example, separately coded playing social games from playing social computer games, and doing household accounts and banking on the computer/over the internet from doing household accounts and banking but not over the internet. In cases where the identification of ICT use is available in more than one format (a dedicated column as well as in activity codes), we use all forms of available information to create this marker. As is the case with the mode of transport, where the diarist may not write down the word “commute” in the activity column if they have written “drove car to work” in the location column, some diarists similarly might write “internet banking” as their activity but not bother to tick the used a computer box. Nevertheless, such an identification of the activity does give use sufficient information to know that the diarist used ICTs during this episode.

ICT variable	Description
ICT = 0	no/not known if computer, mobile, web used
ICT = 1	computer, mobile phone, web used

MTRAV: Mode of transport

Most surveys that collect mode of transport gather and report this information in a separate column, but in some cases the mode of transport is recorded in the activity codes. Again, we use any available information in the data to code MTRAV. For those cases where we identify unrecorded travel, we record the mode of transport as 5 (travel by unspecified means). Where the original survey records an activity such as walking for pleasure, jogging or hiking and no mode of transport is recorded, we code MTRAV as 3 (walk / on foot). Where the activity is coded as cycling for sport and no mode of transport is recorded, we code MTRAV as 4 (cycle). Activities of horse riding, sledding, sailing or rowing a boat, skiing, roller skating/blading and the like are coded as 4 as well.

Mode of transport variable	Description
----------------------------	-------------

MTRAV = -8	activity missing
MTRAV = -7	not travelling
MTRAV = 1	travel in car/truck, on motorcycle (inc. taxi)
MTRAV = 2	travel on public transport
MTRAV = 3	walk / on foot
MTRAV = 4	cycle, other physically active transport
MTRAV = 5	travel by other/unspecified transport

ALONE: Alone or with strangers

CHILD: Child aged <18 present

SPPART: Spouse or partner present

OAD: Other adult present

Collection of the who else is present data varies more across the surveys than other information harmonised into the MTUS. Creating a useful single who else was present variable for a majority of surveys is almost impossible. Instead, we opted to make four flags. As with the other ancillary information, these flag variables are based on a combination of who else is present column information as well as activity codes (and any other relevant information in the diary). Some diary surveys have code frames that mark the presence of others in certain activities. A code for “physical care of children” implies that at least one child is present to receive this care. “Watch TV alone” similar would indicate that other people are not present.

The concept “alone” does not necessarily mean that no other person was within sight of the diarist. If given the option of “alone” in a who else is present matrix, some diarists will select “alone” when on public transport at rush hour, while eating out in a restaurant or shopping for essential goods. In such cases, the diarist most likely is around other people, and the “alone” designation means that the diarist is not engaging with these other people, though the diarist may well moderate her or his behaviour on account of the presence of these other people. The “alone” flag marks cases where the diarist had an option on the survey instrument to indicate that he or she was alone and selected this option.

Most surveys do not ask diarists to count the exact number of other people present. The American Time Use Study includes the most detailed code frame for the presence of others, and even this list allows an unspecified number of certain categories of people to be covered by a single value. Users need to be aware that the presence of children or other adults will not necessarily allow them to identify which children or other adults were present, only that children or other adults were present.

In the case of the presence of children, the MTUS does not distinguish household children from non-household children, or the diarists' own children from other children. Some original surveys do make such distinctions. In the MTUS case, the flag that a child was present simply means at least one person aged <18 was with the diarist.

Where the diarist is in a couple and the who else is present column allows us to distinguish if the spouse or partner was present, we mark this in the spouse column. Some surveys do not distinguish the presence of the spouse from the presence of other household adults. In these cases, we code the presence of the spouse for those cases where we can make this determination. In households comprised only of a couple or of a couple and children, the presence of another household adult necessarily means the presence of the spouse. We comment on this matter in the individual survey documentation and readme files. For such surveys, the presence of the spouse cannot be identified where the household includes more than one couple or a couple and other adults.

The OAD variable covers the presence of any other adult – this includes the presence of the spouse/partner. SPPART and OAD are not mutually exclusive as this allows us to make a maximally relevant code for the surveys harmonised into the MTUS. Users can make more detailed distinctions with some original datasets, though not with others.

Who else present variables	Description
ALONE = 0	others reported present
ALONE = 1	no others reported present
CHILD = 0	child not reported present
CHILD = 1	with child
SPPART = 0	spouse/partner not reported present
SPPART = 1	with spouse/partner
OAD = 0	other adults not reported present
OAD = 1	with other adults

10. Weights

Time diary analysis requires two levels of weighting. First, as in all surveys, weights are needed to bring the sample in line with the population from which it was drawn. Second, weights also balance seasonal variations and variations by day of the week.

World5.3 and World 5.8 contain the following weights:

- OCOMBWT: Original weight (population & day preferred, or whatever original weight is available if not combined);
- PROPWT: Proposed weight (population & day combined weight rescaled if needed) (see below about the rescaling procedure);

The World 6 file does not contain weights for two reasons. First, the weights are calculated at the diary level. Non-response and sample distribution adjustments can be addressed at the level of the diary and the diarist. The meaning of an episode level weight is less clear. There is no way of knowing how many diaries are less detailed than the diarists' actual days or the degree to which activities are under-reported at the episode level. While the sample distribution can be reasonably accurately estimated, it is not possible to estimate the true distributions of episodes in a meaningful way. Second, the meaning of an episode varies by the context of the research purpose (discussed more in the next chapter). As there is not a set unit for all analysis at the episode level, the episode file is best treated as a database from which variables are extracted to match back into the World 5.53 or 5.8 version for analysis.

Some surveys inflate the sample size by a factor to mirror the size of the whole population of the country. If the original weight is inflated, OCOMBWT should be left inflated.

Nevertheless, to promote consistency among the datasets and to prevent surveys from countries with larger populations from apparently swamping surveys from countries with smaller populations, we deflate the original weight in the computation of PROPWT. The mean of the original weight will sum to the inflation factor. Where survey designs collect diaries on a weekday and a weekend day, it is advisable to use the mean of the weekday diaries to deflate weekday diaries and the mean of the original weight for the weekend diaries to deflate the weekend diaries.

If the survey does not include a weight, OCOMBWT should be set to 0. Researchers have to find official statistics describing the population by age and sex. We recommend the United Nations publication "*World Population Prospects*" which contains time-series (since 1950) of the population by age and

sex for each country. Alternative internationally recognised sources, such as the ILO Yearbook also may be used. If the survey has enough cases for you to split age and sex groups by employment status (using emp, employed or not employed) – this means if you have at least 50 cases of working and not-working for each sex and age group – then also include employment status. Note that you may not include employment status for the youngest and oldest diarists if few are working, but include emp for the working age population.

The main MTUS weight, PROPWT, is calculated by:

- 1- Begin from the original survey weight (deflated if the original weight was inflated). If there is no original weight, construct a population weight by dividing the percentage of the population you would expect to be in each age/sex (and in some cases employment status) group by the percentage of cases you actually have in that age/sex (/employment status) category in the sample data (expected/achieved).
- 2- Create a good-diary inflation factor by dividing the total number of diaries collected in the survey by the number of good diaries (total diaries/good diaries).
- 3- Create an interim weight that starts with the same value of the weight in step 1. Second, set the value of this interim weight to 0 for all low-quality diaries (BADCASE=0). Third, multiply your interim weight by the good diary inflation factor you created in step 2 for all cases (it will stay 0 for the bad diaries).
- 4- Compute ASEWT - a sum of the weights for each age/sex(/employment status) group (across all days of the week).
- 5- Compute two further sums: ASERdayWT - a sum of weights for each age/sex (/employment status) group separately for each day of the week, and also: ASERdayCASE - the sum of the number of cases in each age/sex(/employment status) group for each day of the week. (This step differs from step 4 as now you calculate the sums separately for each day of the week).
- 6- Compute an expected sum of weights (ESW) for each day of the week: $ESW = ASEWT / 7$ (divide by 7 as there are 7 days of the week).
- 7- $PROPWT = (ESW / ASERdayWT) / (ASERdayCASE / ASERdayWT)$
- 8- Check that the weight has calculated correctly. PROPWT should have a mean of 1, and PROPWT should sum to the total number of diary cases. When the weight has been applied, the weighted frequency of the diaries by the days of the week should be evenly distributed (14.3% for each day). Similarly, each age/sex group should have an even distribution of diaries across each day of the week.

11. Variable ordering in final files

All variables included in final MTUS files should be saved with lower case names.

The variables should appear in the following order for the MTUS files.

Version 5.53

countrya survey swave msamp hldid persid id parntid1 parntid2 partid day month
year diary badcase hhtype hhldsize nchild agekidx agekid2 incorig income
ownhome urban computer vehicle sex age famstat cphome singpar relrefp
civstat cohab citizen empstat emp unemp student retired empsp workhrs
empinclm occup sector educa edtry rushed health carer disab av1 av2 av3 av4
av5 av6 av7 av8 av9 av10 av11 av12 av13 av14 av15 av16 av17 av18 av19
av20 av21 av22 av23 av24 av25 av26 av27 av28 av29 av30 av31 av32 av33
av34 av35 av36 av37 av38 av39 av40 av41 ocombwt propwt

Version 5.8

countrya survey swave msamp hldid persid id parntid1 parntid2 partid day month
year diary badcase hhtype hhldsize nchild agekidx agekid2 incorig income
ownhome urban computer vehicle sex age famstat cphome singpar relrefp
civstat cohab citizen empstat emp unemp student retired empsp workhrs
empinclm occup sector educa edtry rushed health carer disab main1 main2
main3 main4 main5 main6 main7 main8 main9 main10 main11 main12 main13
main14 main15 main16 main17 main18 main19 main20 main21 main22 main23
main24 main25 main26 main27 main28 main29 main30 main31 main32 main33
main34 main35 main36 main37 main38 main39 main40 main41 main42 main43
main44 main45 main46 main47 main48 main49 main50 main51 main52 main53
main54 main55 main56 main57 main58 main59 main60 main61 main62 main63
main64 main65 main66 main67 main68 main69 av1 av2 av3 av4 av5 av6 av7
av8 av9 av10 av11 av12 av13 av14 av15 av16 av17 av18 av19 av20 av21 av22
av23 av24 av25 av26 av27 av28 av29 av30 av31 av32 av33 av34 av35 av36
av37 av38 av39 av40 av41 sppart ocombwt propwt

Version 6.0

countrya survey swave msamp hldid persid id day cday month year diary
badcase sex age time clockst start end epnum main sec av inout eloc ict mtrav
alone child sppart oad

In the main documentation, you may notice that the old variable “country” (a list of countries included in the MTUS in the order in which the countries were originally added with a wish list of countries at the end) is restored as a part of the final processing of files before the files are uploaded onto the MTUS web site. This process places the variable country after countrya. Other variables which

were included in older versions of the MTUS but have since been dropped should not be saved in these files. Variables which have undergone transformation over time or have been dropped are detailed in the main documentation, the MTUS User Guide:

<http://www.timeuse.org/mtus/documentation/>

SAS, SPSS, and STATA programmes which save the files with variables in the correct order are included on the MTUS web site, user contributions page:

<http://www.timeuse.org/mtus/contributions/>

If this user has created extra variables alongside the standard MTUS files that are submitted for the use by other MTUS users, please save these extra variables in a separate file that includes the MTUS identifiers and the additional variables.

12. Quality checks

Before submitting surveys, coders are asked to carry out a series of quality checks. If these quality checks unravel coding errors, these should be corrected. Inconsistencies in the original data should be reconciled where possible, but any manipulation of the original data should be documented in the README document and conversion programme files. All surveys submitted to the MTUS team will be checked and tested before release.

Please note that prior to getting to this check phase, the person undertaking the conversion should check that all available information has been used to the most full extent to create as many of the MTUS variables as possible. Sometimes creative procedures can be used to break apart highly grouped categories or to construct some variables. The absence of a simple solution does not mean the absence of a solution to create some variables. Variables should be set to -9 (missing from the survey) only if there is no possibility of meaningfully creating the variable for any significant proportion of the diary cases.

Also, if you are upgrading an old conversion of a dataset into an older version of the MTUS, please double-check that all original conversion work was done accurately. With such extensive details as is included in this process, mistakes are inevitable, and the reworking process can help identify and rectify past errors. If you find such an error, please make a documentation note in the conversion programme.

STEP 1: People converting data should examine basic unweighted distributions (frequencies for all categoric variables, for continuous variables, means, minimums, maximums, and number of cases).

- Attention should be paid to the percentage of cases coded as -7 or -8. If this percentage is large, the README file should explain why this is the case.
- It is useful to compare the results with those of other surveys. Large discrepancies with other surveys or sources of statistics may suggest errors, and at the least need explanation in the README file.
- All variables should have the same number of cases. No variable should have any system missing cases or any cases without labels in cases where labels are relevant.
- All variables should have realistic distributions. If 30% of households are coded as “other household type”, or a high percentage of child diarists do not appear to live with their parents, as examples, you should seek an explanation which likely is a conversion problem.
- All variables should have realistic ranges – for instance, no time use variables should have maximum values greater than 1440 or minimum

values less than 0 (unless impossible to code in the survey, in which case they should be coded as -9).

- Means for activities which almost all people engage on a daily basis, such as eating and sleep, should be higher than for activities in which most people do not engage on a daily basis, such as civic activity.
- The propwt should sum to the total number of diary cases (all good + bad diaries), and the mean of propwt should be 1.

STEP 2: A limited range of weighted frequencies also should be checked. When weighted by PROPWT:

- all cases of the variable BADCASE should equal 0 (quality diary)
- each day of the week should appear in equal proportion (14.286%)
- sex and age group distributions should match official statistics of these distributions for this country in the relevant year.

STEP 3: The next step entails examination of combinations of variables to ensure that expected combinations appear. Unexpected combinations generally indicate harmonisation errors. Any discrepancies which cannot be reconciled should be explained in the documentation of the README and conversion programme files.

Means of age, hhldsize and nchild by categories of famstat

- Right age minimums and maximums for categories
- No child in categories with no child, at least 1 child in categories with children
- household size generally higher for households with children
- young people not in single person households

age hhldsize by nchild and retired

- Number of children should be less than household size
- Median age of retired should be higher than median age of non-retired

Cross-tabs of famstat by nchild, hhtype, agekidx, civstat and cphome

- Fewer young people should be married, most children should be cphome=1 if famstat=4, famstat=5 should always map to cphome=0.
- famstat=1,2,4 should not be in single person households (hhtype=1)
- famstat=1 and 4 should not be in couple-only households (hhtype=2); famstat=2 can map to hhtype=2 only when the diarist is aged >18, the spouse is aged <18, and no other people live in the household
- famstat=0,3 should match to agekidx=-7 or 4 & nchild=0, other famstat values should have no agekidx=-7 or 4 or nchild=0 values
- famstat=1 should match to agekidx=1 cases only
- famstat=2 should match to agekidx=2,3 cases only
- famstat=4,5 should match to agekidx=1,2 or 3

Cross-tab agekidx by nchild

- nchild=0 should match to all cases agekidx=-7 or agekidx=4, no positive cases of nchild should have agekidx=-7 or agekidx=4 and no cases of agekidx>-7 and <4 should match to nchild=0

Cross-tabs empstat by emp, unemp, student, retired disab

- emp=1 should correspond only with empstat=1,2,3
- Most people coded as unemployed should not be working, more students and retired should be empstat=4 but some students, retired people and disabled people should be coded as working

Cross-tabs with empsp and partid by civstat and relrefp

- People not in couples should have values of -7 for empsp and partid.
- relrefp=2 (spouse of reference person) and civstat=1 should not match with empsp or partid=-7

Cross-tab civstat by hhtype relrefp partid cohab cphome

- No hhtype=2 should match with civstat=2
- Few civstat=1 should match to hhtype=1 (single person household)
- Diarists with relrefp values of 2 (spouse of reference person) should have a civstat value of 1 (in couple)
- All people with cohab=1 or cohab=0 should have a civstat=1
- All people with cphome=1 should be civstat=2

Cross-tab hhtype by relrefp

- hhtype=1 only should correspond with relrefp=1
- hhtype=2 should correspond with relrefp values of 1 and 2
- hhtype=3 can correspond with all relrefp values
- hhtype=4 can correspond with all relrefp values except 2 (there should be no spouses)

Cross-tab cro hhtype by hhldsize

- hhtype=2 should correspond with hhldsize=2

Cross-tab parntid1 by parntid2

- Except when parents are not present (-7) or both unknown (-8), the two parent identifiers should never have the same value. No person is capable of asexual reproduction. If people live with only 1 parent, the id of the second parent should be -7.

Compute a summary of the total minutes recorded in the diary, first by

- summing the total time by adding up all AV variables that can be computed for the survey
- summing the total time by adding up all MAIN variables that can be computed for the survey

- summing the total time by adding up all time variables for each diary in the World 6 file.

ALL SUMMARIES SHOULD EQUAL 1440 – there is a problem in all cases where the total is not 1440.

STEP 4: Check basic mean time distributions in some activities by days of week:

Some activities feature more prominently on some days than on others. In Christian countries, more religious activity should take place on Sundays than other days; in Jewish and Muslim countries, more religious activity should be recorded on Fridays. More paid work and education takes place on week days, while people generally sleep longer on weekends. Converters should check distributions of mean times for men and for women for performing some basic activities as paid work, education, sleep, and religious activity by days of the week to ensure that expected patterns emerge.

STEP 5: Minimum and maximum values for the following six variables:

HHTYPE	HHSIZE	OWNHOME	NCHILD	AGEKIDX
AGEKID2	INCOME	URBAN	COMPUTER	VEHICLE

should be aggregated to the household level - the maximum and minimum values should have the same value for all household members. Any discrepancies represent harmonisation errors.

STEP 6: Check that only one person in the household has the status of spouse of the reference person on the variable relrefp (relationship to household reference person).

STEP 7: Finally, where a sequence of surveys are available for a country across time, harmonisers should check the weighted mean time for the whole sample and for participants in each activity. Any large jumps or dips in the sequence across time should be investigated and amended. In some circumstances, such variations may represent a changed decision in relation to coding a particular activity (naps, coded in sleep, and doing nothing sometimes are interchanged for example). Weighed distributions of demographic variables also should be checked across time. These distributions include: sex by hhtype, empstat, edtry. Also, the weighted percentage of women and men who are single parents, in couples, students, retired, disabled, and live in a rural home should be compared across time. In such circumstances, some amendments may be necessary in the coded to create a realistic distribution of change in activity across time.

13. Documentation

The following documentation and files should be provided to the MTUS development team:

- SPSS syntax, STATA do or SAS or R programme file. This programme should cover the full process, starting with opening the original file and ending with testing and saving the MTUS version of the file.
- World5.3 World 5.8 and World 6.0 data files (in SPSS, STATA, SAS or R)
- Readme file (as a Word document).

README FILES

These documentation files should be saved in Word (.doc), and present the user with basic details of the survey as well as all specific information about which the user should be aware when using this dataset for analysis. These readme files should be saved with the following naming convention:

Readme_CCCYEAR.doc

CCC corresponds to the 2/3 letter country code (see page 5). YEAR means the start year of the survey.

When you create or modify a readme file, please make a record of the file history in the file properties. In Word 2007, you click on the Windows 2007 symbol, then select “prepare” then “properties”. In older versions of Word, select “file”, then “properties”, then the “summary” tab. Make sure you enter yourself in the author section. If there are previous authors, please note then in the notes section, and note the date that you updated the file. Also please make sure the file name states that this is the readme file for the right country and year.

These files should have a title section with the following appearance:

README FILE FOR COUNTRY YEAR(S)

(World 5.5 – Release 3; World 5.8 & World 6.0 Release -1)
Date File Created or Updated (ie 15 March 2009)

Please use the prepare / properties feature of Word when producing these files. Please write your name and institution in the **author** field, and “Readme file for Country Year” in the **title** field. If you are updating an existing readme file, please copy the name of the previous authors and the date of the previous versions of

the documentation into the **notes** field. Please leave all other properties fields blank.

The file should be saved using English (UK).

CONTENTS:

- **Technical description of the survey**
- **Information on the original files**
- **Time-use variables**
- **Variable-specific information**

The technical description section follows a fixed format, which appears below. These files should be saved with the default language of English – UK. This example is drawn from the readme file for the UK 2005 survey.

The web link should take the user to the more detailed description of the survey on the table of time use studies in the information section of the Centre for Time Use Research web site: <http://www.timeuse.org/information/studies/>

If the more detailed description in the table of time use studies contains errors, needs additional information added, or needs an entry created, please alter CTUR staff to this problem.

The table covers basic information about the survey.

- **Age range** means the age range of diarists, not households or participants in wider elements of a survey
- **Response rate** may be for the whole survey, or reported separately for different elements of the sample – use discretion as to which report would be most helpful to users of the data
- **Number of diary days** means the number of 24 hour diaries each participant was asked to complete (if some elements of the sample were asked to complete 1 diary but others to complete more than one diary, please note this here)
- **Survey period** means the period when the data was collected. If the survey collected data over a continuous period from the 1st of one month to the 31st of another, you can write 1 May 2000 to 31 December 2001, or the whole of 2005. If the survey collected data in waves rather than in a continuous period (as shown below), then please note the months and years when data were collected.
- **Multi-member household survey** means whether the survey collected diaries from one person per household, from one person identified by selection from a national register, other survey or list of phone numbers where it was possible in rare cases for more than one person in the same household to participate but intra-household behaviour analysis is not possible for the sample as a whole, from one person and that person's spouse or partner if the participant is in a couple, or from multiple

- household members (meaning that analysis of intra-household behaviour is meaningful for this survey).
- **Type of diary** means when the data were collected (on the same day as the activities took place) or the previous day (recall)
 - **Mode of data collection** means how the diary was completed (pen and paper, over the internet, with a CATI or CAPI system) and by whom (the diarist or an interviewer – or the diarist but checked by an interviewer)
 - **Time interval** means the diarist entered the start and stop times of activities or the diarist had a grid of fixed time intervals, and if the intervals are fixed, then the row should note the duration of intervals. Some surveys have only one interval through the whole 24 hours (usually 5, 10 or 15 minutes), but some have multiple intervals (for instance 30 minutes from midnight to 6:00, and 10 minute intervals from 6:00 to midnight).
 - **Data on secondary activities / where the activity was carried out / who else was present** Generally these three rows can be answered with yes or no, though if the answer is a qualified yes (meaning very limited information) then give more detail. If the same list of activities or a somewhat less detailed but still extensive list of activities is used to code secondary activity, then you can just write yes to secondary activity. If the survey only collects main activity, but also collects whether a child was in the diarist's care during the activity or if the activity involved the use of a computer or the internet, then limited information on secondary activity is available, and you should say no but xxx is recorded.
 - **Number of activity codes** means the number of original activity codes in the diary. If some additional information would allow more distinction among some codes, please also note this in this cell of the table.
 - **Number of cases in the original file** means the total number of diary cases (if the original file also included non-diaries from people who did not complete a diary, do not count such cases, only include the total number of diaries – including good quality and low quality diaries). Please provide a total for the whole survey. If the survey collected diaries from people aged 18+ as well as from people aged <18, please also provide separate total diary numbers for child and adult diarists.
 - **Number of good diaries** means the number of quality diaries (badcase=0). Please provide a total of good diaries for the whole survey. If the survey collected diaries from people aged 18+ as well as from people aged <18, please also provide separate total for good diaries for child and adult diarists.

TECHNICAL DESCRIPTION OF THE SURVEY

See also: <http://www.timeuse.org/information/studies/data/uk-2005.php>

Age range	16+
Response rate	59% across the four waves
Number of diary days	1 day

Survey period	March-April, June-July, September-October, November-December 2005
Multi-member household survey	No, 1 person per household
Type of diary	Previous day (with some diaries covering up to three days previously)
Mode of data collection	Interviewer completed during face-to-face interview
Time interval in the diary	10 minutes
Data on secondary activities	Yes
Data on where the activity was carried out	Yes (home or elsewhere + mode of transport and purpose of transport)
Data on who else was present	No
Number of activity codes	30 pre-coded activity categories for main and secondary activity, 6 categories of mode of transport and 5 categories of reason for transport
Number of cases in the original file	4941 total diaries 87 diaries from people aged 16-17 4854 diaries from diarists aged 18+
Number of 'good' diaries	4834 good quality diaries 86 diaries from people aged 16-17 4748 diaries from diarists aged 18+

INFORMATION ON THE ORIGINAL FILE

This section should name of the original public use data file or files and give a brief explanation of their content to let the user know if the original data appear as a single massive file where each row case represents a diarist, or a series of files, including an activity episode file, a household level file and an individual diarist file, or another structure.

TIME-USE VARIABLES

The next section of the readme file includes tables mapping the MTUS time use variable codes with the original activity codes. If you needed to use more than one element of the diary to make some codes, you should state this. For instances, you may need to use location (loc=1 at home) and the range of paid work codes to code paid work at home separately from paid work elsewhere. Likewise, you might use location to distinguish eating out (in a café or restaurant) from eating at home or at someone else's home. You might use mode of transport (ie walking) to distinguish walking the dog from other pet care. Any other such instance where multiple elements of the diary are needed to achieve a conversion into the MTUS categories should be noted. If it is not possible to create a category, note this in the relevant cell.

Activity Variable Documentation for CCC YEAR

AV 41 Variables	Activity	CCC YEAR original activity codes
AV1	Formal work	
AV2	Paid work at home	
AV3	Second job	
AV4	School/classes	
AV5	Travel to/from work or education	
AV6	Cooking/washing up	
AV7	Housework	
AV8	Other domestic work	
AV9	Gardening	
AV10	Shopping	
AV11	Child care	
AV12	Domestic travel	
AV13	Dressing/toilet	
AV14	Receive personal services	
AV15	Meals/snacks	
AV16	Sleep/naps	
AV17	Leisure travel	
AV18	Excursions, trips	
AV19	Playing sport	
AV20	Watching sport	
AV21	Walks	
AV22	At church	
AV23	Civic organizations	
AV24	Cinema/theatre	
AV25	Dance/party, etc.	
AV26	Social clubs	
AV27	Pubs	
AV28	Restaurants	
AV29	Visiting friends	
AV30	Listening to radio	
AV31	Watching T.V.	
AV32	Listening to music, etc.	
AV33	Study	
AV34	Reading books	
AV35	Reading papers/magazines	
AV36	Relaxing	
AV37	Conversation	
AV38	Entertaining friends	
AV39	Knitting/sewing	
AV40	Pastimes/hobbies	
AV41	Unknown activity	

MAIN/SEC 69 Variables	Activity	CCC YEAR original activity codes
Main/Sec1	Imputed personal and household care	
Main/Sec2	Sleep or nap	
Main/Sec3	Imputed sleep	
Main/Sec4	Wash/dress/care for self	
Main/Sec5	Meals at work or school	
Main/Sec6	Other meals	
Main/Sec7	Paid work, main job (not at home)	
Main/Sec8	Paid work at home	
Main/Sec9	Second or other job not at home	
Main/Sec10	Unpaid work to generate household income	
Main/Sec11	Travel as a part of work	
Main/Sec12	Work breaks	
Main/Sec13	Other time at workplace	
Main/Sec14	Look for work	
Main/Sec15	Regular schooling, education	
Main/Sec16	Homework	
Main/Sec17	Leisure/other education of training	
Main/Sec18	Food preparation/ cooking	
Main/Sec19	Set table, wash or put away dishes	
Main/Sec20	Cleaning	
Main/Sec21	Laundry, ironing, clothing repair	
Main/Sec22	Home/vehicle maintenance or improvement	
Main/Sec23	Other domestic work	
Main/Sec24	Purchase goods and general consumption activities	
Main/Sec25	Consume personal services	
Main/Sec26	Consume other services	
Main/Sec27	Pet care (not walk dog)	
Main/Sec28	Physical, medical child care	
Main/Sec29	Teach, help with homework	
Main/Sec30	Read to, talk or play	

	with child	
Main/Sec31	Supervise, accompany, other child care	
Main/Sec32	Adult care	
Main/Sec33	Voluntary, civic, organisational activity	
Main/Sec34	Worship and religion	
Main/Sec35	General out-of-home leisure	
Main/Sec36	Attend sporting event	
Main/Sec37	Cinema, theatre, opera, concert	
Main/Sec38	Other public event, venue	
Main/Sec39	Restaurant, café, bar, pub	
Main/Sec40	Party, reception, social event, gambling	
Main/Sec41	Imputed time away from home	
Main/Sec42	General sport or exercise	
Main/Sec43	Walking	
Main/Sec44	Cycling	
Main/Sec45	Other out-of-doors recreation	
Main/Sec46	Garden, forage (pick mushrooms), hunt/fish	
Main/Sec47	Walk dogs	
Main/Sec48	Receive or visit friends	
Main/Sec49	Conversation (in person, phone)	
Main/Sec50	Other in-home social, games	
Main/Sec51	General indoor leisure	
Main/Sec52	Artistic or musical act	
Main/Sec53	Written correspondence	
Main/Sec54	Knit, crafts, hobbies	
Main/Sec55	Relax, think, do nothing	
Main/Sec56	Read	
Main/Sec57	Listen to music, Ipod, CD	
Main/Sec58	Listen to radio	
Main/Sec59	Watch TV, DVD, video	
Main/Sec60	Play computer games	
Main/Sec61	Send e-mail, surf internet, computing	
Main/Sec62	No activity but recorded mode of travel	

Main/Sec63	Travel to or from work	
Main/Sec64	Education-related travel	
Main/Sec65	Voluntary, civic, religious travel	
Main/Sec66	Child & adult care travel	
Main/Sec67	Shopping, personal & household care travel	
Main/Sec68	Other travel	
Main/Sec69	No recorded activity	

Context Variables	Value labels	CCC YEAR original activity and location codes
Inout = 1	Inside	
Inout = 2	Outside	
Inout = 3	In a vehicle	
Eloc = 1	Own home	
Eloc = 2	Another's home	
Eloc = 3	Workplace	
Eloc = 4	School	
Eloc = 5	Service or shop	
Eloc = 6	Restaurant, café	
Eloc = 7	Place of worship	
Eloc = 8	Travelling	
Eloc = 9	Other locations	
Mtrav = 1	Car, motorcycle, taxi	
Mtrav = 2	Public transport	
Mtrav = 3	Walk	
Mtrav = 4	Cycle or other active transport	
Mtrav=5	Other & unspecified	
ICT = 1	Reported using computer, ICT or internet	
Alone	No one else reported present	
Child	Child present	
Sppart	Partner present	
Oad	Other adult present	

BACKGROUND VARIABLE NOTES

The final section should list all survey, household, and individual variables which cannot be created for that survey, and highlight issues related to other variables.

- Three variables always have listings in this section unless they are not possible to create: educa, empinclm, and incorig. These are the variables where we keep the original value labels, and these values and value labels should be listed in this document.
- Any time special procedures are required to construct a variable, you should highlight that point here. For instance, if the whole family completed diaries, but adults completed a more detailed individual questionnaire than children, and the parents' citizenship replies were used to create the citizenship status of the children, then this should be noted. Similarly, if the categories in the original variables differ from MTUS conventions, such as presenting age in age bands rather than as a continuous variable, these differences should be noted here.
- Other complications also should be noted in this section. For instance, if an original public release file displayed some household information only on the row cases of the diarist identified as the household reference person but not for other household members even though these other diarists would have the same value as members of the same household and the converter distributed the information to other household diarists, then this procedure should be noted here. There have been cases where some elements of the original sample were not assigned weights or where original weights required adjustment to balance the distribution of days of the week or to deflate to the sample size rather than the national population size, and these matters similarly should be noted here.
- The survey, household and individual-level variable issues section should be arranged in alphabetical order.
- If there is only one background variable which cannot be created, please include this variable in alphabetical order with the list of other variables requiring comment. If there are multiple background variables that cannot be created, please make a list of all of these variables at the beginning of this section of the readme file before then listing the other variables and comments in alphabetical order.

Examples of the readme files appear in the appendix of the MTUS documentation: <http://www.timeuse.org/mtus/documentation/surveys/>

CONVERSION PROGRAMMES

As the process of converting a time use data file into MTUS format is complex, we advise that you use the statistical package with which you are most familiar. The MTUS includes files converted in R, SAS, SPSS and STATA, and examples using each of these packages appears on the surveys included page of the MTUS web site: <http://www.timeuse.org/mtus/documentation/surveys/>

The file naming convention for the conversion programmes is:
create_CCCYEARW*

CCC corresponds to the 2/3 letter country code (see page 5). YEAR means the start year of the survey. W* should be W553 if the file is only converted into version 5.53. W* should be W58 if converted to versions 5.8 (or 5.8 and 6.0) as well as 5.53. The final extension (.sps, .do etc.) will depend on which package is used in the conversion.

The top of the conversion programme should contain documentation lines, noting which time use survey data is being converted into MTUS format, who did the original conversion and when (date), and if the file is updated, who updated the file and when (date) the update took place.

Conversion programmes should begin by opening an original public release version of the data and end with saving into the MTUS format. All steps required to move from the original data to the end product should appear and be documented whenever comment would be helpful to future users. Any complex manipulations should be explained in a comment line. If the person doing the conversion runs a frequency or simple procedure to look for a specific outcome, a comment line should explain what was looked for and what that outcome means.

If possible, please also send us the original data files (in SPSS, STATA, R or SAS) with their corresponding codebook (in plain text format).