

UnderStandingAmericaStudy

UAS 227: MEMORY AND COGNITIVE ABILITY



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1 INTRODUCTION

This UAS panel survey, titled "UAS 227: Memory and Cognitive Ability" is based on the Health and Retirement Study (HRS) section D. This survey is the online element in a dual-mode study in which respondents complete a web version of HRS Section D on their own as well as participate in a telephone interview based on the telephone version of HRS Section D. The project was funded by an administrative supplement to the U01 "Toward Next Generation Data on Health and Life Changes at Older Ages" (5U01AG054580) to create cognitive categories in the Understanding America Study (UAS) for classifying dementia status. This survey is no longer in the field. Respondents were paid \$10 to complete the survey.

The consent survey associated with this project is UAS311. The telephone survey was conducted by Davis Research of Calabasas, CA.

NOTE: an initial group of respondents participated in UAS 227 who were not part of the larger dual mode study. These respondents can be identified in the data set via the 'supplement' variable.

1.1 Topics

This survey contains questions (among others) on the following topics: Cognitive Abilities. A complete survey topic categorization for the UAS can be found [here](#).

1.2 Experiments

This survey includes experiment(s) of the following type(s): Auxiliary Randomization. Please refer to explanatory comments in the Routing section for detailed information. A complete survey experiment categorization for the UAS can be found [here](#).

1.3 Citation

Each publication, press release or other document that cites results from this survey must include an acknowledgment of UAS as the data source and a disclaimer such as, 'The project described in this paper relies on data from survey(s) administered by the Understanding America Study, which is maintained by the Center for Economic and Social Research (CESR) at the University of Southern California. The content of this paper is solely the responsibility of the authors and does not necessarily represent the official views of USC or UAS.' For any questions or more information about the UAS, contact Tania Gutsche, Project and Panel Manager, Center for Economic and Social Research, University of Southern California, at tgutsche@usc.edu.

2 SURVEY RESPONSE AND DATA

2.1 Sample selection and response rate

The sample selection for this survey was:

Two samples were used for this survey: 1) an initial sample of a random selection of active respondents who did not participate in the Dual mode study; and 2) a custom selection of active English speaking respondents aged 60 and older. The two samples can be differentiated by the supplement variable in the data set.

As such, this survey was made available to 1900 UAS participants. Of those 1900 participants, 1752 completed the survey and are counted as respondents. Of those who are not counted as respondents, 7 started the survey without completing and 141 did not start the survey. The overall response rate was 92.21%.

Note: We are unable to provide sample weights for a small number of UAS members (see the Sample weighting section below for details). If they completed the survey, these members are included in the data set with a weight of zero, but accounted for in the computation of total sample size and survey response rate.%.

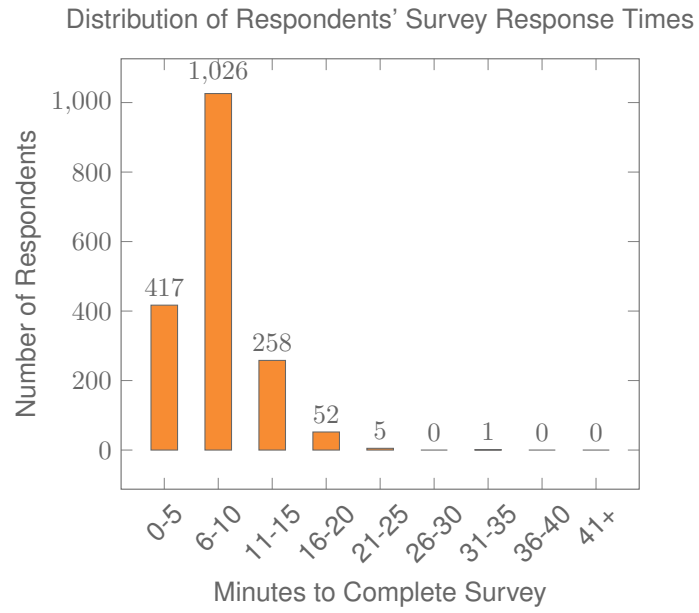
The detailed survey response rate is as follows:

UAS227 - Response Overview	
Size of selected sample	1900
Completed the survey	1752
Started but did not complete the survey	7
Did not start the survey	141
Response rate	92.21%

2.2 Timings

The survey took respondents an average of 8 minutes, and the full distribution of survey response times is available in the figure below. Times per question are available upon re-

quest.



2.3 Weighting

Weights are not (yet) available for this survey. Please contact UAS staff with any questions.

3 STANDARD VARIABLES

Each Understanding America Study data contains a series of standard variables, consisting of individual, household and sample identifiers, language indicator, time stamps and a rating by the respondent of how much he or she liked the survey:

- **uasid**: the identifier of the respondent. This identifier is assigned to a respondent at recruitment and stays with the respondent throughout each and every survey he/she participates in. When analyzing data from multiple surveys, the 'uasid' can be used to merge data sets.
- **uashhid**: the household identifier of the respondent. Every member is assigned a household identifier, stored in the variable 'uashhid'. For the primary respondent this identifier equals his or her 'uasid'. All other eligible members of the primary respondent's household (everyone who is 18 or older in the household) who become UAS respondents receive the 'uasid' of the primary respondent as their household identifier. The identifier 'uashhid' remains constant over time for all respondents. Thus it is always possible to find the original UAS household of an UAS panel member (even after they, for example, have moved out to form another household).
- **survhhid**: uniquely identifies the household a UAS panel member belongs to in a given survey. For instance, if the primary respondent and his/her spouse are both UAS members at the time of a given survey, they both receive the same 'survhhid' identifier for that survey. If they subsequently split, they receive two different 'survhhid' in subsequent surveys. They, however, always share the same 'uashhid'. The identifier 'survhhid' is set to missing (.) if no other household members are UAS panel members at the time of the survey. Since individuals can answer the same survey at different points in time (which can be relatively far apart if the survey is kept in the field for a prolonged time), it may be possible that, within the same data set, household members have different 'survhhid' reflecting different household compositions at the time they answered the survey. For instance, suppose that the primary respondent and his/her spouse are both UAS members. If the primary respondent answers the survey when he/she is living with the spouse, but the spouse answers the survey when the couple has split, they receive different 'survhhid'. Hence, the variable 'survhhid' identifies household membership of UAS panel members, at the time the respondent answers the survey. Note: in the My Household survey 'survhhid' is set to unknown (.u) for respondents who last participated in the My Household survey prior to January 21, 2015.
- **uasmembers**: is the number of other household members who are also UAS panel members at the time of the survey. Since individuals can answer the same survey at different points in time (which can be relatively far apart is the survey is kept in the field for a prolonged time), it may be possible that, within the same data set, the primary respondent of a household has a value of '0', whereas the second UAS household respondent has a value of '1'. Therefore 'uasmembers' should be interpreted as the

number of household and UAS panel members at the time the respondent answers the survey. Note: in the My Household survey 'uasmembers' is set to unknown (.u) for respondents who last participated in the My Household survey prior to January 21, 2015.

- **sampleframe**: indicates the sampling frame from which the household of the respondent was recruited. All UAS recruitment is done through address based sampling (ABS) in which samples are acquired based on postal records. Currently, the variable 'sampleframe' takes on four values reflecting four distinct sample frames used by the UAS over the year (in future data sets the number of sample frames used for recruitment may increase if additional specific populations are targeted in future recruitment batches):
 1. U.S. National Territory: recruited through ABS within the entire U.S.
 2. Areas high concentration Nat Ame: recruited through ABS in areas with a high concentration of Native Americans in the zip-code. Within these batches, individuals who are not Native Americans are not invited to join the UAS.
 3. Los Angeles County: recruited through ABS within Los Angeles County.
 4. California: recruited through ABS within California.

Note: prior to March 6, 2024 this variable was called sampletype and had the following value labels for the above list in UAS data sets:

1. Nationally Representative Sample: recruited through ABS within the entire U.S.
 2. Native Americans: recruited through ABS in areas with a high concentration of Native Americans. Within these batches, individuals who are not Native Americans are not invited to join the UAS.
 3. LA County: recruited through ABS within Los Angeles County.
 4. California: recruited through ABS within California.
- **batch**: indicates the batch from which the respondent was recruited. Currently, this variable takes the following values (in future data sets the number of batches may increase as new recruitment batches are added to the UAS):
 1. ASDE 2014/01
 2. ASDE 2014/01
 3. ASDE 2014/01
 4. Public records 2015/05
 5. MSG 2015/07
 6. MSG 2016/01
 7. MSG 2016/01
 8. MSG 2016/01
 9. MSG 2016/02

10. MSG 2016/03
11. MSG 2016/04
12. MSG 2016/05
13. MSG 2016/08
14. MSG 2017/03
15. MSG 2017/11
16. MSG 2018/02
17. MSG 2018/08
18. MSG 2019/04
19. MSG 2019/05
20. MSG 2019/11
21. MSG 2020/08
22. MSG 2020/10
23. MSG 2021/02
24. MSG 2021/08
25. MSG 2021/08
26. MSG 2022/02
27. MSG 2022/02
28. MSG 2022/08
29. MSG 2022/11
30. MSG 2022/11
31. MSG 2023/01
32. MSG 2023/06
33. MSG 2023/09
34. MSG 2023/10

Note: prior to March 6, 2024 this variable had the following value labels for the above list in UAS data sets:

1. ASDE 2014/01 Nat.Rep.
2. ASDE 2014/01 Native Am.
3. ASDE 2014/11 Native Am.
4. LA County 2015/05 List Sample
5. MSG 2015/07 Nat.Rep.
6. MSG 2016/01 Nat.Rep. Batch 2
7. MSG 2016/01 Nat.Rep. Batch 3

8. MSG 2016/01 Nat.Rep. Batch 4
9. MSG 2016/02 Nat.Rep. Batch 5
10. MSG 2016/03 Nat.Rep. Batch 6
11. MSG 2016/04 Nat.Rep. Batch 7
12. MSG 2016/05 Nat.Rep. Batch 8
13. MSG 2016/08 LA County Batch 2
14. MSG 2017/03 LA County Batch 3
15. MSG 2017/11 California Batch 1
16. MSG 2018/02 California Batch 2
17. MSG 2018/08 Nat.Rep. Batch 9
18. MSG 2019/04 LA County Batch 4
19. MSG 2019/05 LA County Batch 5
20. MSG 2019/11 Nat. Rep. Batch 10
21. MSG 2020/08 Nat. Rep. Batch 11
22. MSG 2020/10 Nat. Rep. Batch 12
23. MSG 2021/02 Nat. Rep. Batch 13
24. MSG 2021/08 Nat. Rep. Batch 15
25. MSG 2021/08 Nat. Rep. Batch 16
26. MSG 2022/02 Nat. Rep. Batch 17 (priority)
27. MSG 2022/02 Nat. Rep. Batch 17 (regular)
28. MSG 2022/08 Nat. Rep. Batch 18
29. MSG 2022/11 LA County Batch 6
30. MSG 2022/11 Nat. Rep. Batch 20
31. MSG 2023/01 Nat. Rep. Batch 21
32. MSG 2023/06 Nat. Rep. Batch 22
33. MSG 2023-09 Native Am. Batch 3
34. MSG 2023-10 Nat. Rep. Batch 23

- **primary_respondent**: indicates if the respondent was the first person within the household (i.e. to become a member or whether s/he was added as a subsequent member. A household in this regard is broadly defined as anyone living together with the primary respondent. That is, a household comprises individuals who live together, e.g. as part of a family relationship (like a spouse/child/parent) or in context of some other relationship (like a roommate or tenant).
- **hardware**: indicates whether the respondent ever received hardware or not. Note: this variable should not be used to determine whether a respondent received hardware at a given point in time and/or whether s/he used the hardware to participate in a survey. Rather, it indicates whether hardware was ever provided:

1. None
 2. Tablet (includes Internet)
- **language**: the language in which the survey was conducted. This variable takes a value of 1 for English and a value of 2 for Spanish.
 - **start_date (start_year, start_month, start_day, start_hour, start_min, start_sec)**: indicates the time at which the respondent started the survey.
 - **end_date (end_year, end_month, end_day, end_hour, end_min, end_sec)**: indicates the time at which the respondent completed the survey.
 - **cs_001**: indicates how interesting the respondent found the survey.

4 BACKGROUND DEMOGRAPHICS

Every UAS survey data set includes demographic variables, which provide background information about the respondent and his/her household. Demographic information such as age, ethnicity, education, marital status, work status, state of residence, family structure is elicited every quarter through the “My Household” survey. The demographic variables provided with each survey are taken from the most recent ‘MyHousehold’ survey answered by the respondent. If at the time of a survey, the information in “My Household” is more than three months old, a respondent is required to check and update his or her information before being able to take the survey.

The following variables are available in each survey data set:

- **gender**: the gender of the respondent.
- **dateofbirth_year**: the year of birth of the respondent.
- **age**: the age of the respondent at the start of the survey.
- **agerange**: if the respondent’s age cannot be calculate due to missing information, ‘agerange’ indicates the approximate age. Should a value for both the ‘age’ and ‘agerange’ be present, then ‘age’ takes precedence over ‘agerange’.
- **citizenus**: indicates whether the respondent is a U.S. citizen.
- **bornus**: indicates whether the respondent was born in the U.S.
- **stateborn**: indicates the state in which the respondent was born. This is set to missing (.) if the respondent was not born in the U.S.
- **countryborn**: indicates the country in which the respondent was born. This is set to missing (.) if the respondent was born in the U.S.
- **countryborn_other**: indicates the country of birth if that country is not on the drop down list of countries shown to the respondent’.
- **statereside**: the state in which the respondent is living.
- **immigration_status**: indicates whether the respondent is an immigrant. It takes one of the following values: 0 Non-immigrant, 1 First generation immigrant (immigrant who migrated to the U.S), 2 Second generation immigrant (U.S.-born children of at least one foreign-born parent), 3 Third generation immigrant (U.S.-born children of at least one U.S.-born parent, where at least one grandparent is foreign-born), or 4 Unknown immigrant status.
- **maritalstatus**: the marital status of the respondent.
- **livewithpartner**: indicates whether the respondent lives with a partner.

- **education**: the highest level of education attained by the respondent.
- **hisplativo**: indicates whether the respondent identifies him or herself as being Hispanic or Latino. This variable is asked separately from race.
- **hisplatinogroup**: indicates which Hispanic or Latino group a respondent identifies him or herself with. This is set to missing (.) if the respondent does not identify him or herself as being Hispanic or Latino.
- **white**: indicates whether the respondent identifies him or herself as white (Caucasian).
- **black**: indicates whether the respondent identifies him or herself as black (African-American).
- **nativeamer**: indicates whether the respondent identifies him or herself as Native American (American Indian or Alaska Native).
- **asian**: indicates whether the respondent identifies him or herself as Asian (Asian-American).
- **pacific**: indicates whether the respondent identifies him or herself as Native Hawaiian or Other Pacific Islander.
- **race**: indicates the race of the respondent as singular (e.g., '1 White' or '2 Black') or as mixed (in case the respondent identifies with two or more races). The value '6 Mixed' that the respondent answered 'Yes' to at least two of the single race categories. This variable is generated based on the values of the different race variables (white, black, nativeamer, asian, pacific). This composite measure is not conditional on hisplativo, so an individual may identify as Hispanic or Latino, and also as a member of one or more racial groups.
- **working**: indicates whether the respondent is working for pay.
- **sick_leave**: indicates whether the respondent is not working because sick or on leave.
- **unemp_layoff**: indicates whether the respondent is unemployed or on lay off.
- **unemp_look**: indicates whether the respondent is unemployed and looking for a job.
- **retired**: indicates whether the respondent is retired.
- **disabled**: indicates whether the respondent has a disability.
- **If_other**: specifies other labor force status.
- **laborstatus**: indicates the labor force status of the respondent as singular (e.g., '1 Working for pay' or '2 On sick or other leave') or as mixed (in case the respondent selects two or more labor statuses). The value '8 Mixed' indicates that the respondent answered 'Yes' to at least two of the single labor force status variables. This variable is generated based on the values of the different labor status variables (working, sick_leave, unempl_layoff, unempl_look, retired, disabled, If_other).

- **employmenttype**: indicates the employment type of the respondent (employed by the government, by a private company, a nonprofit organization, or self-employed). This is set to missing (.) if the respondent is not currently working or currently on sick or other leave.
- **workfullpart**: indicates whether the respondent works full or part-time. This is set to missing (.) if the respondent is not currently working or currently on sick or other leave.
- **hourswork**: indicates the number of hours the respondent works per week. This is set to missing (.) if the respondent is not currently working or currently on sick or other leave.
- **hhincome**: is the total combined income of all members of the respondent's household (living in their household) during the past 12 months.
- **anyhhmember**: indicates whether there were any members in the respondent's household at the time he/she answered the survey as reported by the respondent.
- **hhmembernumber**: indicates the number of household members in the respondent's household at the time of the survey as reported by the respondent. It may be that 'anyhhmember' is 'Yes', but 'hhmembernumber' is missing if the respondent did not provide the number of household members at the time of the survey.
- **hhmemberin_#**: indicates whether a household member is currently in the household as reported by the respondent. Household members are never removed from the stored household roster and their information is always included in survey data sets. The order of the roster is the same order in which household members were specified by the respondent in the 'MyHousehold' survey. The order is identified by the suffix _# (e.g., _1 indicates the first household member, _2 the second household member, etc.).

As an example, if the first household member is in the household at the time of the survey, 'hhmemberin_1' is set to '1 HH Member 1 is in the HH'; if he/she has moved out, 'hhmemberin_1' is set to '0 HH member 1 is no longer in the HH'. Since information of other household members (stored in the variables listed below) is always included in survey data sets, information about 'hhmemberin_1' is available whether this person is still in the household or has moved out.

- **hhmembergen_#**: indicates the gender of another household member as reported by the respondent.
- **hhmemberage_#**: indicates the age of another household member. The age is derived from the month and year of birth of the household member as reported by the respondent.
- **hhmemberrel_#**: indicates the relationship of the respondent to the other household member as reported by the respondent.

- **hhmemberuasid_#**: is the 'uasid' of the other household member if this person is also a UAS panel member. It is set to missing (.) if this person is not a UAS panel member at the time of the survey. Since this identifier is directly reported by the respondent (chosen from a preloaded list), it may differ from the actual (correct) 'uasid' of the UAS member it refers to because of reporting error. Also, this variable should not be used to identify UAS members in a given household at the time of the survey. This is because the variables 'hhmemberuasid_#' are taken from the most recent 'My Household' and changes in household composition involving UAS members may have occurred between the time of the respondent answered 'My Household' and the time the respondent answers the survey. To follow UAS members of a given household, it is advised to use the identifiers 'uashhid' and 'survhhid'.
- **lastmyhh_date**: the date on which the demographics variables were collected through the 'My Household' survey.

5 MISSING DATA CONVENTIONS

Data files provide so-called clean data, that is, answers given to questions that are not applicable anymore at survey completion (for example because a respondent went back in the survey and skipped over a previously answered question) are treated as if the questions were never asked. In the data files all questions that were asked, but not answered by the respondent are marked with (.e). All questions never seen by the respondent (or any dirty data) are marked with (.a). The latter may mean that a respondent did not view the question because s/he skipped over it; or alternatively that s/he never reached that question due to a break off. If a respondent did not complete a survey, the variables representing survey end date and time are marked with (.c). Household member variables are marked with (.m) if the respondent has less household members (e.g. if the number of household members is 2, any variables for household member 3 and up are marked with (.m)).

UAS provides data in STATA and CSV format. Stata data sets come with include variable labels that are not available in the CSV files. Value labels are provided for single-response answer option. In STATA these labels will include the labels 'Not asked' and 'Not answered' for (.a) and (.e), and will show in tabulations such as 'tab q1, missing'. For multiple-response questions a binary variable is created for each answer option indicating whether the option was selected or not. A summary variable is also provided in string format reflecting which options were selected and in which order. For example, if a question asked about favorite animals with options cat, dog, and horse, then if a respondent selected horse and then cat, the binary variables for horse and cat will be set to yes, while the overall variable would have a string value of '3-1'. If no answer was given, all binary variables and the summary variable will be marked with '.e'.

Questions that are asked multiple times are often implemented as so-called array questions. Supposing the name of such question was Q1 and it was asked in 6 different instances, your data set would contain the variables Q1_1_ to Q1_6_. To illustrate, if a survey asked the names of all children, then child_1_ would contain the name of the first child the respondent named and so on.

More information about the UAS data in general can be found on the UAS Data Pages web site.

6 ROUTING SYNTAX

The survey with routing presented in the next section includes all of the questions that make up this survey, the question answers when choices were provided, and the question routing. The routing includes descriptions of when questions are grouped, conditional logic that determines when questions are presented to the respondent, randomization of questions and answers, and fills of answers from one question to another.

If you are unfamiliar with conditional logic statements, they are typically formatted so that **if** the respondent fulfills some condition (e.g. they have a cellphone or a checking account), **then** they are presented with some other question or the value of some variable is changed. If the respondent does not fulfill the condition (e.g. they are not a cellphone adopter or they do not have a checking account), something **else** happens such as skipping the next question or changing the variable to some other value. Some of the logic involved in the randomization of questions or answers being presented to the respondent is quite complex, and in these instances there is documentation to clarify the process being represented by the routing.

Because logic syntax standards vary, here is a brief introduction to our syntax standards. The syntax used in the conditional statements is as follows: '=' is equal to, '<' is less than, '>' is greater than, and '!= ' is used for does not equal. When a variable is set to some number N, the statement looks like 'variable := N'.

The formatting of the questions and routing are designed to make it easier to interpret what is occurring at any given point in the survey. Question ID is the bold text at the top of a question block, followed by the question text and the answer selections. When a question or variable has associated data, the name links to the appropriate data page, so you can easily get directly to the data. Text color is used to indicate the routing: **red** is conditional logic, **gold** is question grouping, **green** is looping, and **orange** is used to document randomization and other complex conditional logic processes. The routing is written for a computer to parse rather than a human to read, so when the routing diverges significantly from what is displayed to the respondent, a screenshot of what the respondent saw is included.

The name of the randomization variables are defined in proximity to where they are put into play, and like the question ID the names of the randomization variables can be used to link directly to the associated data page.

7 SURVEY WITH ROUTING

Start of section **PreloadD**

Start of section **PreloadSupplement**

/* Respondents of this survey fall into two groups per these values of the supplement variable:

- o 1 Respondents who were participants in a dual mode study in which they filled out this survey on the web and on the phone.
- o 2 Respondents who filled out the UAS 227 survey as a normal, stand-alone survey.

For respondents in the supplement group the following information was preloaded into the survey:

- o assignment_order: indicates in what order a respondent was randomized to participate in the two surveys with values:
 - 1 Telephone, then online
 - 2 Online, then telephone

In both cases the second survey took place approximately one month after completion of the first one.

- o WordListValue.supplement: as part of the survey respondents are presented with a list of words, which they are then asked to recall at two points within the survey; one directly after seeing the list and one after having answered several other questions. The exact word list that they see is pre-assigned so it does not conflict with the one administered in the telephone interview. It takes one of the following values, where each list is a pre-set 10 item subset of a 40-item wordlist:
 - 1 Word list 1
 - 2 Word list 2
 - 3 Word list 3
 - 4 Word list 4

*/

```
assignment_order := getModeOrder()
assignment_order_flag := 1
supplement := 2
```

IF assignment_order = EMPTY THEN

```
| assignment_order_flag := 2
```

```
ELSE
```

```
| supplement := 1
```

```
END OF IF
```

```
WordListValue.supplement := getSupplementList();
```

```
IF WordListValue.supplement = EMPTY THEN
```

```
| WordListValue.supplement_flag := 2
```

```
END OF IF
```

End of section **PreloadSupplement**

```
/* The z076 variable originates from HRS Section D and indicates whether this is a re-interview or not. It is always set to "No" in this survey.*/
```

```
z076 := NO
```

```
/* The d190 variable originates from HRS Section D and indicates whether questions D178 and D179 should be asked or not in case of a re-interview. It is always set to "No" in this survey, but since z076 is set to "No" as well, D178 and D179 are always asked.*/
```

```
d190 := 1
```

```
/* The hrscawi variable originates from HRS Section D and indicates whether this is a web based interview or not. It is always set to "Yes" in this survey.*/
```

```
hrscawi := 1
```

```
/* SCORING */
```

```
/* The data set for this survey contains a series of variables reflecting scoring for the Serial Seven subtraction task in which respondents are asked to subtract 7 from a starting number (100) several times. They are the following:
```

- o d142_ok: result of first subtraction. Takes a value of 1 (correct), 5 (incorrect) or empty (no answer given). Answer is considered correct if it equals 100 - 7.
- o d143_ok: result of second subtraction. Takes a value of 1 (correct), 5 (incorrect) or empty (no answer given). Answer is considered correct if answer equals d142 - 7.
- o d144_ok: result of third subtraction. Takes a value of 1 (correct), 5 (incorrect) or empty (no answer given). Answer is considered correct if answer equals d143 - 7.
- o d145_ok: result of fourth subtraction. Takes a value of 1 (correct), 5 (incorrect) or empty (no answer given). Answer is considered correct if answer equals d144 - 7.

- o d146_ok variables: result of fifth subtraction. Takes a value of 1 (correct), 5 (incorrect) or empty (no answer given). Answer is considered correct if answer equals d145 - 7.
- o serialseven: contains the number of correct answers.

*/

/* The data set for this survey contains a series of variables reflecting scoring for the Word recall task in which respondents are asked to recall a presented list of words. They are the following:

- o d106_score: the number of correctly recalled words for the first recall (directly following presentation of the list) via an automatic check during survey administration.
- o recall1_score: the number of correctly recalled words (immediate recall directly following presentation of the list) once a manual verification has been completed (e.g. to account for minor misspellings).
- o d148_score: the number of correctly recalled words for the second recall (after having answered several other questions) via an automatic check during survey administration.
- o recall2_score: the number of correctly recalled words for the second recall (delayed recall after having answered several other questions) once a manual verification has been completed (e.g. to account for minor misspellings).

*/

End of section **PreloadD**

Start of section **SectionD**

D101 (RATE MEMORY in section SectionD)

This survey is concerned with people's memory, and ability to think about things. Please answer all questions as best you can without using any aides such as calculators, online searches, or pencil and paper.

First, how would you rate your memory at the present time?

- 1 Excellent
- 2 Very good
- 3 Good
- 4 Fair
- 5 Poor

Fill code of question FLD102 executed

D102 (RATE MEMORY COMPARED TO PAST in section SectionD)

Compared to (Z092, Z093 // disabled for now/two years ago), would you say your memory is better now, about the same, or worse than it was then?

- 1 Better
- 2 Stayed the same
- 3 Worse

```
IF WordListValue = EMPTY THEN
  IF WordListValue.supplement = RESPONSE THEN
    | WordListValue := WordListValue.supplement
  ELSE
    | WordListValue := mt_rand(1,4)
  END OF IF
END OF IF
```

D103 (Section SectionD)

Next, we'll display a total of 10 words, one at a time, and ask you to recall as many as you can. We have purposely made the list long so that it will be difficult for anyone to recall all the words - - most people recall just a few. Please pay careful attention as the words are displayed because they will not be repeated. After all of the words have been displayed, I will ask you to type as many of the words as you can recall, in any order. (IWER: Please click "Next" when you are ready to begin.)

Fill code of question FL_D104Word executed

WR002 (Section SectionD)

Please click "Next" to continue.

GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

D106 (word recall 1 open in section SectionD)

Now please type the words you can recall in the box below, separating each word with a space.

STRING

D106_dkrf (dk/rf word recall 1 open in section SectionD)

97 I don't remember any words

98 I don't want to try and remember any words

END OF GROUP

IF D106 = RESPONSE THEN

D106_score := getCorrectWordCount(1, WordListValue, D106)

ELSE

D183 := 12

D106_score := getCorrectWordCount(1, WordListValue, D106)

END OF IF

GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

D110_intro (CESD - FELT DEPRESSED IN PAST WEEK in section SectionD)

Now think about the past week and the feelings you have experienced.

Please tell us if each of the following was true for you much of the time during the past week.

SUBGROUP OF QUESTIONS

D110 (CESD - FELT DEPRESSED IN PAST WEEK in section SectionD)

Much of the time during the past week, you felt depressed.

1 Yes

5 No

D111 (CESD - EVERYTHING WAS EFFORT IN PAST WK in section SectionD)

You felt that everything you did was an effort.

1 Yes

5 No

D112 (CESD - SLEEP WAS RESTLESS IN PAST WEEK in section SectionD)

Your sleep was restless.

1 Yes

5 No

D113 (CESD - HAPPY IN PAST WEEK in section SectionD)

You were happy.

1 Yes

5 No

D114 (CESD - FELT LONELY IN PAST WEEK in section SectionD)

You felt lonely.

1 Yes

5 No

D115 (CESD - ENJOYED LIFE IN PAST WEEK in section SectionD)

You enjoyed life.

1 Yes
5 No

D116 (CESD - FELT SAD IN PAST WEEK in section SectionD)
You felt sad.

1 Yes
5 No

D117 (CESD - COULD NOT GET GOING IN PAST WEEK in section SectionD)
You could not get going.

1 Yes
5 No

END OF SUBGROUP

END OF GROUP

D142 (SERIES MINUS 7- 1 in section SectionD)
Now let's try some subtraction of numbers.

One hundred minus 7 equals what?
RANGE 0..996

IF D142 = RESPONSE THEN

D143 (SERIES MINUS 7- 2 in section SectionD)
This is the second subtraction.

And 7 from that?
RANGE 0..996

IF D143 = RESPONSE THEN

D144 (SERIES MINUS 7- 3 in section SectionD)
This is the third subtraction.

And 7 from that?
RANGE 0..996

IF D144 = RESPONSE THEN

D145 (SERIES MINUS 7- 4 in section SectionD)
This is the fourth subtraction.

And 7 from that?
RANGE 0..996

IF D145 = RESPONSE THEN

D146 (SERIES MINUS 7- 5 in section SectionD)

This is the fifth subtraction.

And 7 from that?

RANGE 0..996

END OF IF

END OF IF

END OF IF

END OF IF

GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

D237 (Section SectionD)

The next two tests are meant to test for speed. Please click inside each box below as quickly as you can. When you are finished, click 'Next' to continue.

D237_log (log of D237 clicks in section SectionD)

STRING

END OF GROUP

D238 (sentence typing in section SectionD)

Next, we would like you to type the sentence below as quickly as you can. When you are ready, please begin typing in the box, then click 'Next' when you are finished.

"The quick brown fox jumps over the lazy dog"

STRING

IF D183 != 12 AND D183 != 13 THEN

GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

D148 (word recall 2 open in section SectionD)

A little while ago, before you typed in the sentence in the last question, we displayed a list of unrelated words and you typed the ones you could remember. Please type any of those words that you still remember now, separating each word with a space.

STRING

D148_dkrf (dk/rf word recall 2 open in section SectionD)

97 I don't remember any words

98 I don't want to try and remember any words

END OF GROUP

```
| D148_score := getCorrectWordCount(2, WordListValue, D148)
```

```
END OF IF
```

```
IF hrscawi = 1 THEN
```

```
ELSE
```

```
IF z076 != YES OR A019.Age ≥ 65 THEN
```

```
D150 (COGNITION INTRO- 2 in section SectionD)
```

We're interested in how memory actually works. We find that even people with very good memories seem to forget some things from time to time. The next questions are a little different, but are often asked in studies about memory.

GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

```
D151 (TODAYS DATE- MONTH in section SectionD)
```

Please enter today's date.

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

```
D152 (TODAYS DATE- DAY in section SectionD)
```

RANGE 1..31

```
D153 (TODAYS DATE- YEAR in section SectionD)
```

NUMBER (NO DECIMALS ALLOWED)

```
END OF GROUP
```

```
IF D151 = date("n") THEN
```

```
| D151_OK := YES
```

```
ELSE
```

```
| D151_OK := NO
```

```
END OF IF
```

```
IF D152 = date("j") THEN
```


| D152_OK := YES

ELSE

| D152_OK := NO

END OF IF

IF D153 = date("Y") THEN

| D153_OK := YES

ELSE

| D153_OK := NO

END OF IF

D154 (TODAYS DATE- DAY OF WEEK in section SectionD)

What is the day of the week?

0 Sunday

1 Monday

2 Tuesday

3 Wednesday

4 Thursday

5 Friday

6 Saturday

IF D154 = date("w") THEN

| D154_OK := YES

ELSE

| D154_OK := NO

END OF IF

D155 (TOOL USED TO CUT PAPER in section SectionD)

Now we are going to ask you for the names of some people and things.

What do people usually use to cut paper?

STRING

D156 (NAME OF PRICKLY DESERT PLANT in section SectionD)

What do you call the kind of prickly plant that grows in the desert?

STRING

D157 (WHO IS THE PRESIDENT OF US in section SectionD)

Who is the President of the United States right now?

STRING

D158 (WHO IS THE VICE-PRESIDENT OF US in section SectionD)

Who is the Vice President?

| STRING
END OF IF

IF Z076 != YES THEN

D159 (INTRO - VOCAB WORDS in section SectionD)

Now please type the meanings of some words we will show you. Any way you want to define the word is fine.

IF randomizer_words = EMPTY THEN

| randomizer_words := mt_rand(1,2)

END OF IF

Fill code of question FLWords executed

D161 (MEANING OF REPAIR/CONCEAL in section SectionD)

What is the meaning of the word (**repair**)?

STRING

D163 (MEANING OF FABRIC/ENORMOUS in section SectionD)

What is the meaning of the word (**fabric**)?

STRING

D165 (MEANING OF DOMESTIC/PERIMETER in section SectionD)

What is the meaning of the word (**domestic**)?

STRING

D167 (MEANING OF REMORSE/COMPASSION in section SectionD)

What is the meaning of the word (**remorse**)?

STRING

D169 (MEANING OF PLAGIARIZE/AUDACIOUS in section SectionD)

What is the meaning of the word (**plagiarize**)?

STRING

END OF IF

END OF IF

IF Z076 != YES OR D190 = 0 THEN

D178 (CHANCE GET DISEASE in section SectionD)

Next we would like to ask you some questions which assess how people use numbers in everyday life.

If the chance of getting a disease is 10 percent, how many people out of 1,000 would be expected to get the disease?

RANGE 0..1000

D179 (LOTTERY SPLIT 5 WAYS in section SectionD)

If 5 people all have the winning numbers in the lottery and the prize is two million dollars, how much will each of them get?

RANGE 0..2000000

IF D178 = 100 AND D179 = 400000 THEN

D180 (INTEREST ON SAVINGS in section SectionD)

Let's say you have \$200 in a savings account. The account earns 10 percent interest per year.

How much would you have in the account at the end of two years?

RANGE 0.0..9996.0

END OF IF

END OF IF

D171 (HOW OFTEN ASSISTANCE SECTION D in section SectionD)

How often did you receive assistance with answers to these questions about your memory and ability to think about things?

1 Never

2 A few times

3 Most or all of the time

End of section **SectionD**

Start of section **Closing**

IF supplement = 1 THEN

IF assignment_order = 2 THEN

GROUP OF QUESTIONS PRESENTED ON THE SAME SCREEN

daviscontact (Section Closing)

Thank you! The next part of this project is to do this same survey by telephone, about a month from now. We we will contact you by email to remind you, and at that time we will also provide a link on your UAS page so that you can schedule a date and time for that call, if you like.

phone1 (Section Closing)

What is the best number to call when we contact you by telephone to do the survey?

STRING

```

phone2 (Section Closing)
Is there another number we should try?
STRING

END OF GROUP
ELSE
thankyousupplement (Section Closing)
Thank you for completing our telephone / online survey study! Your participation is very
much appreciated - we can't do it without you! We will contact you again when we have
new online surveys available.
END OF IF

dummy := updateStatus()
END OF IF

CS_001 (HOW PLEASANT INTERVIEW in section Closing)
Could you tell us how interesting or uninteresting you found the questions in this survey?
1 Very interesting
2 Interesting
3 Neither interesting nor uninteresting
4 Uninteresting
5 Very uninteresting

CS_003 (comments in section Closing)
Do you have any other comments on the survey? Please type these in the box below.(If
you have no comments, please click next to complete this survey.)
STRING

dummy := completedWordrecall()

End of section Closing

/* Please note that although question CS.003 is listed in the routing, the answers are
not included in the microdata in the event identifiable information is captured. Cleaned
responses are available by request. */

```