Overview of the National Longitudinal Survey of Youth 1997 (NLSY97)

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CFDR Workshop Series

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BGSU
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Introduction to the NLSY 97

- NLSY97 is one of the five cohort studies conducted by the U.S. Department of Labor's Bureau of Labor Statistics.
- NLSY97 initially was designed to document how the youths transit from school to work and into adulthood.
- The Subject Areas of NLSY97 now include:

Labor market behavior	Relationships with parents
Educational experiences	Contact with absent parents
Training	Marital and fertility histories
Participation in government assistance programs	Dating
Expectations	Sexual activity
Criminal behavior	Onset of puberty
Alcohol and drug use	Time use

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Introduction to the NLSY 97 (Continued)

- NLSY 97 is a cohort survey whose target cohort is youths who were 12 to 16 years old as of December 31, 1996.
- NLSY97 was conducted annually between 1997 and 2012 and biennially afterwards. Currently, seventeen rounds of data were available for public use through NLS Investigator website. Not every subject topic was examined in every round of NLSY97.
- NLSY97 used a multi-stage stratified sampling method to select eligible households. Blacks and Hispanic were over-sampled. At the first phase, 96,512 households were selected from 1,748 sample segments embedded within 147 primary sampling units (PSUs). At the second phase, screening interviews were used to identify 9,907 households with eligible youths, and 8,984 of them participated in the 1997 survey.
- The NLSY97 data were mainly collected using Computer-Assisted Personal Interview(CAPI). Audio Computer-Assisted Self-Interview (ACASI), and questionnaires,

Advantages and Challenges of Using NLSY97

Advantages:

- A variety of subject areas covered in NLSY97.
- A clearer temporal order of variables.
- Individual heterogeneity is better controlled.
- A better understanding of how youths transited into adulthood and what may influence such a transition.
- Many roster variables have been created for research use.
- Provide custom weight variables

Challenges:

- Generalizability problem (Findings are cohort-specific.)
- Changes to designs and questionnaire of NLSY97 over time
- The original raw data are too large to be directly downloaded and analyzed. Thus, researchers need to learn how to use NLS Investigator website to download they data they need.
- The availability of 17 rounds of data creates the problems of linking and constructing variables across rounds of surveys.
- Different analytic strategies are needed if more than two rounds of data are used.

How to Use NLS Investigator Website

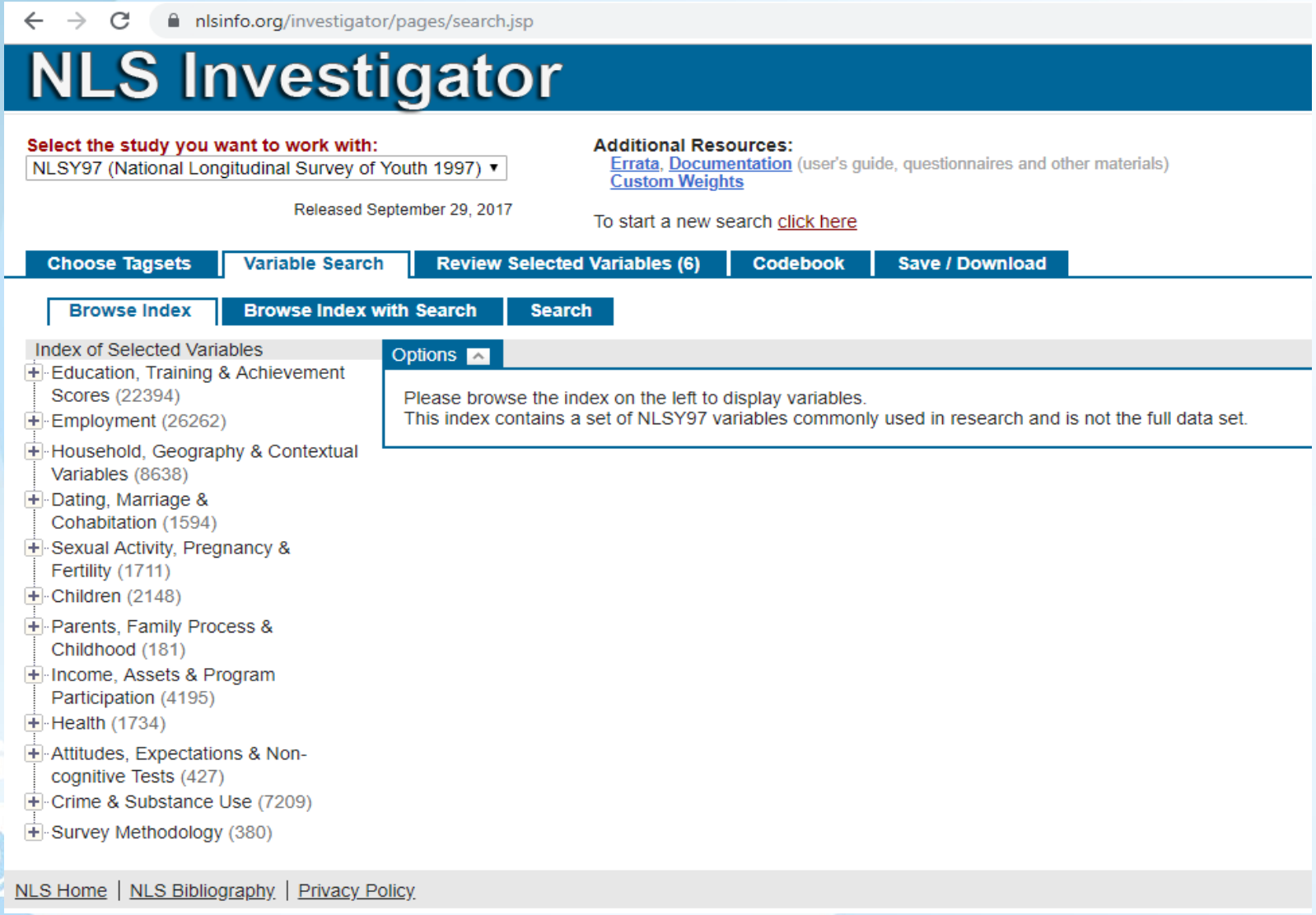
- NLSY97 main webpage (https://www.nlsinfo.org/content/cohorts/nlsy97)

- NLSY97 User's Guide (Rounds 1-13)
- https://www.nlsinfo.org/site/nlsy97/nlsdocs/nlsy97/maintoc.html

How to Use NLS Investigator Website

- NLS Investigator

https://www.nlsinfo.org/investigator/pages/login.jsp



How to Use NLS Investigator Website

Obtaining NLSY 97 data:

Step 1. Register with the website

Sept 2. Browse or search variables

Step 3. Select the variables you want

Step 4. Download the data

Sept 5. Run the corresponding SAS, SPSS, or Stata command codes to create the data file for your analyses

(Note: I will show you how to download and create marital status variables from rounds 1 to 17 at the workshop)

How to Use Weight Variables

- NLSY97 weight variables can be customized, depending on how many rounds of surveys are used and whether the focus is on respondents participating in all or any of these rounds.

- The custom weight variables were created by adjusting for differences in base weight, nonresponse to the screener, different response rates to the screener, different cross-sectional weights for Black and Hispanic respondents, nonresponse to the main interview.

- NLSY97 custom weight variable is a post-stratification person weight variable.

- NLSY97 custom weight variables can be downloaded from the website: https://www.nlsinfo.org/content/cohorts/nlsy97/using-and-understanding-the-data/sample-weights-design-effects

Downloading Weights

- Person weights for the NLSY97 are not downloaded from the Investigator
  - Download weights from: https://www.nlsinfo.org/weights/nlsy97
- Once unzipped, .dat file can be opened in a text editor
- Then the data can be copied into Excel. Use the “text to column” function to separate the variables, and add variable names in the top row
- Excel file can be imported into Stata
- Then, weights can be merged to your dataset. Make sure the linking variable is the same variable type in both datasets
- Note: Variance stratum and PSU weights are downloaded from the Investigator
- svyset command = `svyset R0219145 [pw = yourwght], strata(R0219146) vce (linearized)`

Tips and Stata code for using NLSY97

- Missing values
- Loops to code consistent variables
- Using information across rounds
- Linking roster items across rounds
- Finding the first partner's age

Missing Values

- NLSY97 variables use different codes for negative values
  - -1 = refusal
  - -2 = don't know
  - -3 = invalid skip
  - -4 = valid skip
  - -5 = non-interviewed

- Keep track of missing values because some measures are incomplete without them
  - Example: number of biological children in household (CV_BIO_CHILD_HH) coded to -4 for respondents with no biological children

Using Loops to Code Consistently

- Loops can help to code the same variable over multiple rounds consistently and efficiently
  - Forvalues for foreach in STATA
  - Arrays in SAS

- Marital Status Example

Using Information Across Rounds

- You can use information from a series of rounds to:
  - Create time-invariant measures
  - Predict values in the past or future
- Examples include establishing nativity, employment histories, and using dates of experiences.

- Nativity Code Example

How to Link Data from Different Rounds together

- Linking data from different rounds is necessary to describe how individuals remain the same or change over time.
- Use NLSY97 for two types of linking:
  - The first type is to link the characteristics of a respondent over time. For example, researchers may want to understand how the respondent's marital status, educational attainment, or employment status changed over time.
  - The second type is to link the characteristics of people related with respondents over time. For example, researchers may want to understand the gender and education attainment of all spouses that an respondent have had.
  - The second type of linking is more difficult than the first type of linking.
- NLSY website provides sample SAS codes for these two types of linking.
  - https://www.nlsinfo.org/content/getting-started/intro-to-the-nls/tutorials/tutorial-linking-roster-items-across-rounds
  - https://www.nlsinfo.org/content/getting-started/intro-to-the-nls/tutorials/tutorial-matching-cohabiting-partners-their

How to Link Data from Different Rounds Together

Table 1. Example of Linking Marital Status across Rounds in NLSY 97

	Rounds					
Respondents	1	2	3	4	5	6
Bob	never married	never married	never married	never married	never married	never married
Jim	never married	never married	never married	never married	married	divorced
Kim	never married	never married	married	married	married	married
Matt	never married	married	divored	married	divored	married

Table 2. Example of Different Spouses at Rounds of NLSY 97

	Rounds					
Respondents	1	2	3	4	5	6
Bob	never married	never married	never married	never married	never married	never married
Jim	never married	never married	never married	never married	married to Sue	divorced
Kim	never married	never married	married to Terry	married	married	married
Matt	never married	married to Pam	divored	married to Ann	divored	married to Jesey

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How to Link Data from Different Rounds Together

The complexities involved:

• The marital history roster indicates whether a respondent has a spouse or partner at a time, which allows for identifying when a respondent was married or cohabiting. However, this roster provides the position, rather than the unique identification number (i.e. the ID variable) of the spouses or partners.

• Researchers need to use the position that the spouse or partner hold at the round of survey to find the unique ID assigned to the spouse or partner at the time.

• NLSY97 stores the information of spouses/partners in three different files: the marriage and cohabitation section, the household roster, and the non-resident roster. These files differ in how to extract the information about spouses/partners.

• The members in the marriage and cohabitation section, the household roster, and the non-resident roster change over time and require different ways of merging with other files.

How to Link Data from Different Rounds Together

Five steps of conducting the second type of linking:

- Determine when a respondent had his/her first partner and what position the partner holds in the partner roster at that time. This will be the master data file.
- Construct separate data files from the marriage and cohabitation section, the household roster, and the non-resident roster.
- Merge the master data file with the data from the marriage and cohabitation section using the partner position at that time.
- Merge the master data file with the data from the household roster using the partner ID.
- Merge the master data file with the non-resident roster using the partner ID.

Journal Articles Using NLSY 97

Manning, Wendy D. (2015) Family Formation Processes: Assessing the Need for a New Nationally Representative Household Panel Survey in the United States. Journal of Economic and Social Measurement,40(1-4),197-219.

Guzzo, K.B. (2015). Young parents and co-residence with their own parents (2015 Working Paper Series). Retrieved from California Center for Population Research: http://papers.ccpr.ucla.edu/papers/PWP-BGSU-2015-008/PWP-BGSU-2015-008.pdf

Sandberg-Thoma,S.S.; Snyder, A.R. & Jang. BJ. (2015). Exiting and Returning to the Parental Home for Boomerang Kids, Journal of Marriage and Family, 77(3), 806-818. http://DX.DOI: 10.1111/jomf.12183

Tumin, D.; Siqi Han, S. & Qian, Z. (2014). Estimates and Meanings of Marital Separation. Journal of Marriage and Family, 77(1), 312-322. http://DX.DOI: 10.1111/jomf.12149

Conclusions

- NLSY97 provided an excellent opportunity to examine how the youth transited into the adulthood. With measures of various subject areas, NLSY may shed light on why some youths made the transition while some did not.
- You need to decide your analytic models first before linking and constructing variables.
- Given the size and complexity of NLSY97, please remember that it will take lots of time to link or construct variables using NLSY97.
- Both SAS and Stata can link and construct the variables of interest. If you like to work with data in the wide format, you can use SAS. If you like to work with data in the long format, you can use Stata.
- If you have any questions about using the NLSY97 data. Please feel free to contact Paul or Hsueh-Sheng.

```
*  NLSY97-Wrkshp_Loops-Example_07-28-19_ph.do

*  project: workshop on the NLSY97
*  task:    show an exmaple of loops
*  data:    NLSY97
*  author:  Paul / 07-10-19

****************
*  Method_1: Creates mar_1997 through mar_2011 individually
****************
clear
version 14
set more off

use "R:\CFDR\NCMR Students\RAs_Current\Paul\Current_Projects\NLSY97_Workshop\Data_Examples\Data\Workshop_Data.dta"

label define yn 0 "0. no", modify
label define yn 1 "1. yes", modify

numlabel, add   // add values to the labels
rename *, lower // make all variable names lowercase

*  1997
gen mar_1997 = 0
replace mar_1997 = 1 if inlist(cv_marstat_1997, 3, 4)
replace mar_1997 = . if cv_marstat_1997 < 0
label variable mar_1997 "Was R married in 1997?"
label values mar_1997 yn
tab cv_marstat_1997 mar_1997, mi

*  1998
gen mar_1998 = 0
replace mar_1998 = 1 if inlist(cv_marstat_1998, 3, 4)
replace mar_1998 = . if cv_marstat_1998 < 0
```

```
label variable mar_1998 "Was R married in 1998?"
label values mar_1998 yn
tab cv_marstat_1998 mar_1998, mi

*  1999
gen mar_1999 = 0
replace mar_1999 = 1 if inlist(cv_marstat_1999, 3, 4)
replace mar_1999 = . if cv_marstat_1999 < 0
label variable mar_1999 "Was R married in 1999?"
label values mar_1999 yn
tab cv_marstat_1999 mar_1999, mi

*  2000
gen mar_2000 = 0
replace mar_2000 = 1 if inlist(cv_marstat_2000, 3, 4)
replace mar_2000 = . if cv_marstat_2000 < 0
label variable mar_2000 "Was R married in 2000?"
label values mar_2000 yn
tab cv_marstat_2000 mar_2000, mi

*  2001
gen mar_2001 = 0
replace mar_2001 = 1 if inlist(cv_marstat_2001, 3, 4)
replace mar_2001 = . if cv_marstat_2001 < 0
label variable mar_2001 "Was R married in 2001?"
label values mar_2001 yn
tab cv_marstat_2001 mar_2001, mi

*  2002
gen mar_2002 = 0
replace mar_2002 = 1 if inlist(cv_marstat_2002, 3, 4)
replace mar_2002 = . if cv_marstat_2002 < 0
label variable mar_2002 "Was R married in 2002?"
label values mar_2002 yn
```

```
tab cv_marstat_2002 mar_2002, mi

*  2003
gen mar_2003 = 0
replace mar_2003 = 1 if inlist(cv_marstat_2003, 3, 4)
replace mar_2003 = . if cv_marstat_2003 < 0
label variable mar_2003 "Was R married in 2003?"
label values mar_2003 yn
tab cv_marstat_2003 mar_2003, mi

*  2004
gen mar_2004 = 0
replace mar_2004 = 1 if inlist(cv_marstat_2004, 3, 4)
replace mar_2004 = . if cv_marstat_2004 < 0
label variable mar_2004 "Was R married in 2004?"
label values mar_2004 yn
tab cv_marstat_2004 mar_2004, mi

*  2005
gen mar_2005 = 0
replace mar_2005 = 1 if inlist(cv_marstat_2005, 3, 4)
replace mar_2005 = . if cv_marstat_2005 < 0
label variable mar_2005 "Was R married in 2005?"
label values mar_2005 yn
tab cv_marstat_2005 mar_2005, mi

*  2006
gen mar_2006 = 0
replace mar_2006 = 1 if inlist(cv_marstat_2006, 3, 4)
replace mar_2006 = . if cv_marstat_2006 < 0
label variable mar_2006 "Was R married in 2006?"
label values mar_2006 yn
tab cv_marstat_2006 mar_2006, mi
```

```
*  2007
gen mar_2007 = 0
replace mar_2007 = 1 if inlist(cv_marstat_2007, 3, 4)
replace mar_2007 = . if cv_marstat_2007 < 0
label variable mar_2007 "Was R married in 2007?"
label values mar_2007 yn
tab cv_marstat_2007 mar_2007, mi

*  2008
gen mar_2008 = 0
replace mar_2008 = 1 if inlist(cv_marstat_2008, 3, 4)
replace mar_2008 = . if cv_marstat_2008 < 0
label variable mar_2008 "Was R married in 2008?"
label values mar_2008 yn
tab cv_marstat_2008 mar_2008, mi

*  2009
gen mar_2009 = 0
replace mar_2009 = 1 if inlist(cv_marstat_2009, 3, 4)
replace mar_2009 = . if cv_marstat_2009 < 0
label variable mar_2009 "Was R married in 2009?"
label values mar_2009 yn
tab cv_marstat_2009 mar_2009, mi

*  2010
gen mar_2010 = 0
replace mar_2010 = 1 if inlist(cv_marstat_2010, 3, 4)
replace mar_2010 = . if cv_marstat_2010 < 0
label variable mar_2010 "Was R married in 2010?"
label values mar_2010 yn
tab cv_marstat_2010 mar_2010, mi

*  2011
gen mar_2011 = 0
```

```
replace mar_2011 = 1 if inlist(cv_marstat_2011, 3, 4)
replace mar_2011 = . if cv_marstat_2011 < 0
label variable mar_2011 "Was R married in 2011?"
label values mar_2011 yn
tab cv_marstat_2011 mar_2011, mi

sum mar_*
/*  Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
    mar_1997 |      1,672    .0017943    .0423333          0          1
    mar_1998 |      3,274    .0125229    .1112199          0          1
    mar_1999 |      4,846    .0226991    .1489579          0          1
    mar_2000 |      6,413     .035085     .184009          0          1
    mar_2001 |      7,875    .0534603    .2249639          0          1
-------------+---------------------------------------------------------
    mar_2002 |      7,894    .0747403    .2629885          0          1
    mar_2003 |      7,749    .1068525    .3089456          0          1
    mar_2004 |      7,493    .1437342    .3508434          0          1
    mar_2005 |      7,329     .182426    .3862216          0          1
    mar_2006 |      7,548    .2201908    .4144026          0          1
-------------+---------------------------------------------------------
    mar_2007 |      7,406    .2493924    .4326905          0          1
    mar_2008 |      7,472    .2794433    .4487557          0          1
    mar_2009 |      7,544    .3079268    .4616667          0          1
    mar_2010 |      7,464    .3370847    .4727457          0          1
    mar_2011 |      7,400    .3578378    .4793965          0          1  */


***************
*  Method_2: Creates mar_1997 through mar_2011 with a loop
***************
clear
version 14
set more off
```

```
use "R:\CFDR\NCMR Students\RAs_Current\Paul\Current_Projects\NLSY97_Workshop\Data_Examples\Data\Workshop_Data.dta"

label define yn 0 "0. no", modify
label define yn 1 "1. yes", modify

numlabel, add   // add values to the labels
rename *, lower // make all variable names lowercase

*  1997-2011
forvalues x  = 1997/2011 {
 gen mar_`x' = 0
 replace mar_`x' = 1 if inlist(cv_marstat_`x', 3, 4)
 replace mar_`x' = . if cv_marstat_`x' < 0
 label variable mar_`x' "Was R married in `x'?"
 label values mar_`x' yn
 tab cv_marstat_`x' mar_`x', mi
 }

sum mar_*
/*  Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
    mar_1997 |      1,672    .0017943    .0423333          0          1
    mar_1998 |      3,274    .0125229    .1112199          0          1
    mar_1999 |      4,846    .0226991    .1489579          0          1
    mar_2000 |      6,413     .035085     .184009          0          1
    mar_2001 |      7,875    .0534603    .2249639          0          1
-------------+---------------------------------------------------------
    mar_2002 |      7,894    .0747403    .2629885          0          1
    mar_2003 |      7,749    .1068525    .3089456          0          1
    mar_2004 |      7,493    .1437342    .3508434          0          1
    mar_2005 |      7,329     .182426    .3862216          0          1
    mar_2006 |      7,548    .2201908    .4144026          0          1
-------------+---------------------------------------------------------
```

```
    mar_2007 |      7,406    .2493924    .4326905          0          1
    mar_2008 |      7,472    .2794433    .4487557          0          1
    mar_2009 |      7,544    .3079268    .4616667          0          1
    mar_2010 |      7,464    .3370847    .4727457          0          1
    mar_2011 |      7,400    .3578378    .4793965          0          1  */
```

```
***************
*  Method_3: Creates mar_1 through mar_15 with a loop (sometimes it's easier to rename wide longitudinal data 1 through j)
***************
clear
version 14
set more off

use "R:\CFDR\NCMR Students\RAs_Current\Paul\Current_Projects\NLSY97_Workshop\Data_Examples\Data\Workshop_Data.dta"

label define yn 0 "0. no", modify
label define yn 1 "1. yes", modify

numlabel, add   // add values to the labels
rename *, lower // make all variable names lowercase

*  1997-2011
local j = 1
forvalues x  = 1997/2011 {
  gen mar_`j' = 0
  replace mar_`j' = 1 if inlist(cv_marstat_`x', 3, 4)
  replace mar_`j' = . if cv_marstat_`x' < 0
  label variable mar_`j' "Was R married in `x'?"
  label values mar_`j' yn
  tab cv_marstat_`x' mar_`j', mi
  local j = `j' + 1
  }

sum mar_*
```

```
/*  Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
       mar_1 |      1,672    .0017943    .0423333          0          1
       mar_2 |      3,274    .0125229    .1112199          0          1
       mar_3 |      4,846    .0226991    .1489579          0          1
       mar_4 |      6,413     .035085     .184009          0          1
       mar_5 |      7,875    .0534603    .2249639          0          1
-------------+---------------------------------------------------------
       mar_6 |      7,894    .0747403    .2629885          0          1
       mar_7 |      7,749    .1068525    .3089456          0          1
       mar_8 |      7,493    .1437342    .3508434          0          1
       mar_9 |      7,329     .182426    .3862216          0          1
      mar_10 |      7,548    .2201908    .4144026          0          1
-------------+---------------------------------------------------------
      mar_11 |      7,406    .2493924    .4326905          0          1
      mar_12 |      7,472    .2794433    .4487557          0          1
      mar_13 |      7,544    .3079268    .4616667          0          1
      mar_14 |      7,464    .3370847    .4727457          0          1
      mar_15 |      7,400    .3578378    .4793965          0          1  */
```

***NLSY97-Wrkshp_Nativity-Example_07-10-19_ph.do**

```
*  project: workshop on the NLSY97
*  task:    write code to establish nativiy
*  data:    NLSY97
*  author:  Paul / 07-10-19

clear
version 14
set more off

use "R:\CFDR\NCMR Students\RAs_Current\Paul\Current_Projects\NLSY97_Workshop\Data_Examples\Data\Workshop_Data.dta"

label define yn 0 "0. no", modify
label define yn 1 "1. yes", modify

numlabel, add   // add values to the labels
rename *, lower // make all variable names lowercase

***************
*  explore the created variables on nativity
***************
tab1 cv_citizenship_1997, mi // has aout 20% missing

/*                  CV_CITIZENSHIP 1997 |      Freq.     Percent        Cum.
--------------------------------------+-----------------------------------
                                   -4 |      1,042       11.60       11.60
          1. Citizen, born in the U.S. |      6,869       76.46       88.06
          2. Unknown, not born in U.S. |        279        3.11       91.16
3. Unknown, can't determine birthplace |        794        8.84      100.00
--------------------------------------+-----------------------------------
                                Total |      8,984      100.00           */

tab1 cv_citizen_*, mi // most of the missings in these variables are from valid skip
```

```
*****************
*  explore YHI-55701 variable
*****************
tab1 yhhi_55701_*, mi
list pubid_1997 yhhi_55701_* in 1/100
/*
```

	pubid_1997	yhh~2001	yhh~2002	yhh~2003	yhh~2004	yhh~2006	yhh~2007	yhh~2008	yhh~2009	yhh~2010	yhh~2011	yhh~2013	yhh~2015
1.	1. 1 TO 999	0. NO	-4	-4	-4	0. NO	-4	-4	-4	-4	-4	-4	-4
2.	2	0. NO	-4	-4	-4	-5	-5	-4	-4	-4	-4	-4	-4
3.	3	1. YES	-4	-4	-4	-5	-5	-5	-4	-5	-4	-4	-5
4.	4	1. YES	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4
5.	5	1. YES	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4
6.	6	1. YES	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4
7.	7	1. YES	-4	-5	-5	-4	-5	-5	-4	-4	-4	-5	-4
8.	8	1. YES	-4	-4	-4	-4	-4	-5	-4	-5	-4	-5	-4
9.	9	1. YES	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4	-4
10.	10	1. YES	-4	-4	-4	-4	-4	-4	-4	-5	-5	-5	-5

```
  some respondents were asked this multiple times but it looks like the answers are consistent w/in person throughout; I will check this */


*****************
* check if there is inconsistency in responses to question YHHI-55701
*****************
*  make copies with new names and missing values
local i = 1
forvalues x = 2001/2004 {
  gen us_born_copy`i' = yhhi_55701_`x'
  replace us_born_copy`i' = . if yhhi_55701_`x' < 0
  local i = `i' + 1
  }

local i = 5
forvalues x = 2006/2011 {
  gen us_born_copy`i' = yhhi_55701_`x'
  replace us_born_copy`i' = . if yhhi_55701_`x' < 0
```

```
 local i = `i' + 1
 }

gen us_born_copy11 = yhhi_55701_2013
replace us_born_copy11 = . if yhhi_55701_2013 < 0

gen us_born_copy12 = yhhi_55701_2015
replace us_born_copy12 = . if yhhi_55701_2015 < 0

*  make new versions that extend the first valid value to all rounds
forvalues x = 1/12 {
 gen us_born_temp`x' = 99
 replace us_born_temp`x' = us_born_copy`x' if us_born_copy`x' != .
 }

list us_born_temp* in 1/10

*  apply the first valid value to all subsequent years
local i = 1
forvalues x = 2/12 {
 replace us_born_temp`x' = us_born_temp`i' if us_born_temp`x' == 99 & us_born_temp`i' != 99
 local i = `i' + 1
 }
list us_born_temp* in 1/20

*  apply the first valid value to all previous years
local i = 12
forvalues x = 11 (-1) 1 {
 replace us_born_temp`x' = us_born_temp`i' if us_born_temp`x' == 99 & us_born_temp`i' != 99
 local i = `i' - 1
 }
list us_born_temp* in 1/20

sum us_born_temp* // since these aren't all the same, I think they're some inconsistencies
```

```
*  check
gen us_born_check = 0

local i = 1
forvalues x = 2/12 {
  replace us_born_check = 1 if us_born_temp`x' != us_born_temp`i'
  }

list pubid_1997 us_born_temp* if us_born_check == 1
list pubid_1997 yhhi_55701_* if us_born_check == 1 // these are the cases that are inconsisitent

***************
*  create nativity variable based on YHI-55701
***************
label define usborn -2 "-2. missing", modify
label define usborn -1 "-1. inconsistent answers", modify
label define usborn 0 "0. foreign born", modify
label define usborn 1 "1. us born", modify

gen us_born = 99
replace us_born = 1 if us_born_temp1 == 1
replace us_born = 0 if us_born_temp1 == 0
replace us_born = -1 if us_born_check == 1
replace us_born = -2 if us_born_temp1 == 99

label variable us_born "Was R born in the US"
label values us_born usborn
notes us_born: source var(s) = yhhi_55701_*

tab us_born, mi // looks good

/*  Was R born in the US |      Freq.     Percent        Cum.
------------------------+-----------------------------------
```

```
             -2. missing |        250        2.78        2.78
-1. inconsistent answers |         12        0.13        2.92
         0. foreign born |        569        6.33        9.25
              1. us born |      8,153       90.75      100.00
-------------------------+-----------------------------------
                   Total |      8,984      100.00          */
```

```
***************
*  create nativity variable based on YHI-55701
***************
tab key_race_ethnicity_1997, mi // no missings

label define race 1 "1. NH White", modify
label define race 2 "2. NH Black", modify
label define race 3 "3. Native born Hispanic", modify
label define race 4 "4. Foreign born Hispanic", modify
label define race 5 "5. NH Other", modify

gen race = 0
replace race = 1 if key_race_ethnicity_1997 == 4
replace race = 2 if key_race_ethnicity_1997 == 1
replace race = 3 if key_race_ethnicity_1997 == 2 & us_born == 1
replace race = 4 if key_race_ethnicity_1997 == 2 & us_born == 0
replace race = 5 if key_race_ethnicity_1997 == 3
replace race = . if key_race_ethnicity_1997 == 2 & inlist(us_born, -1, -2)

label variable race "R's race with nativity"
label values race race
notes race: source var(s) = key_race_ethnicity_1997, us_born

tab key_race_ethnicity_1997 race, mi // looks good
tab us_born race, mi              // looks good
tab race, mi
```

/*R's race with nativity | Freq. Percent Cum.

	Freq.	Percent	Cum.
1. NH White	4,665	51.93	51.93
2. NH Black	2,335	25.99	77.92
3. Native born Hispanic	1,500	16.70	94.61
4. Foreign born Hispanic	356	3.96	98.58
5. NH Other	83	0.92	99.50
.	45	0.50	100.00
Total	8,984	100.00	

Only 0.5% of sample (n = 45) missing now */

```
****************************************
* 1. read in the NLSY97 data
****************************************

clear
set more 1

infile using "E:\temp\nlsy workshop\mar_status\mar_status.dct"
do "E:\temp\nlsy workshop\mar_status\mar_status-value-labels2.do"

rename *, lower
save "E:\temp\nlsy workshop\mar_status\mar_status.dta", replace


************************************************************
* 2. First type of linking
************************************************************

**********************************************************************
* This command shows how to link the individual characterstics over time
**********************************************************************


use "F:\nlsy workshop\mar_status\mar_status.dta", clear

set more 1


*****************************************************************************************
* Use nested foreach command to find the new household positions for family members
*****************************************************************************************

local i=0

foreach x in hhi_uid_01_1998 hhi_uid_02_1998 hhi_uid_03_1998 hhi_uid_04_1998 hhi_uid_05_1998 ///
          hhi_uid_06_1998 hhi_uid_07_1998 hhi_uid_08_1998 hhi_uid_09_1998 hhi_uid_10_1998 ///
          hhi_uid_11_1998 hhi_uid_12_1998 hhi_uid_13_1998 hhi_uid_14_1998 {

local i=`i'+1
gen position_`i' =.

local j=0
          foreach y in hhi_uid_01_2013 hhi_uid_02_2013 hhi_uid_03_2013 hhi_uid_04_2013 hhi_uid_05_2013 ///
                       hhi_uid_06_2013 hhi_uid_07_2013 hhi_uid_08_2013 hhi_uid_09_2013 hhi_uid_10_2013 ///
                       hhi_uid_11_2013 hhi_uid_12_2013 {
local j = `j'+1

display " `i' _ `j'"

replace position_`i' = `j' if `x' == `y' & !inlist(`x',-4,-5)
                  }
        }



list hhi_uid_01_1998  hhi_uid_01_2013- hhi_uid_12_2013 if position_1==5

list hhi_uid*_1998   in 346
list hhi_uid*_2013   in 346
list position_*      in 346



*************************************************************************************************
* Use the new household position to extract the respondent information at the new round of survey
*************************************************************************************************

local i = 0
foreach x in position_1 position_2 position_3 position_4 position_5 position_6 position_7 ///
position_8 position_9 position_10 position_11 position_12 position_13 position_14 {
local i=`i'+1

local j=0
gen sex_`i'_2013 =.


        foreach y in hhi_sex_01_2013 hhi_sex_02_2013 hhi_sex_03_2013 hhi_sex_04_2013 hhi_sex_05_2013 ///
                     hhi_sex_06_2013 hhi_sex_07_2013 hhi_sex_08_2013 hhi_sex_09_2013 hhi_sex_10_2013 ///
                     hhi_sex_11_2013 hhi_sex_12_2013 {
                local j = `j'+1
                display " `i' _ `j'"
                replace sex_`i'_2013 = `y' if `x' == `j'
                }
```

```
}


************************************************************
* The position in 2013 for the 1st family member in 1998
************************************************************
tab1 position_1, mis
list pubid position_1 if position_1 ==5

list hhi_uid*_1998   if pubid_1997 == 346
list hhi_uid*_2013   if pubid_1997 == 346
list hhi_sex_*_2013  if pubid_1997 == 346, nol
list position_* sex_*_2013 in 346




*****************************************
* 3. Second type of Linking
*****************************************


**************************************
* 3.1. Create the Cohabitation Partner file
**************************************

clear
set more 1

infile using "F:\nlsy workshop\cohabit_ptnr\cohabitation.dct"
do "F:\nlsy workshop\cohabit_ptnr\cohabitation-value-labels2.do"
save "F:\nlsy workshop\cohabit_ptnr\cohabit_ptnr.dta", replace


*************************************************************************
*  3.2. This command file looked at the marital/partner link variables,
*     fond the first spouse/parter, and decide time and postion that
*     the spouse/partner holds
*************************************************************************

use "F:\nlsy workshop\cohabit_ptnr\cohabit_ptnr.dta", clear

rename *, lower

keep pubid mar_partner_link_*

rename  mar_partner_link_1994_05_xrnd   mar_partner_link1
rename  mar_partner_link_1994_06_xrnd   mar_partner_link2
rename  mar_partner_link_1994_07_xrnd   mar_partner_link3
rename  mar_partner_link_1994_08_xrnd   mar_partner_link4
rename  mar_partner_link_1994_09_xrnd   mar_partner_link5
rename  mar_partner_link_1994_10_xrnd   mar_partner_link6
rename  mar_partner_link_1994_11_xrnd   mar_partner_link7
rename  mar_partner_link_1994_12_xrnd   mar_partner_link8
rename  mar_partner_link_1995_01_xrnd   mar_partner_link9
rename  mar_partner_link_1995_02_xrnd   mar_partner_link10
rename  mar_partner_link_1995_03_xrnd   mar_partner_link11
rename  mar_partner_link_1995_04_xrnd   mar_partner_link12
rename  mar_partner_link_1995_05_xrnd   mar_partner_link13
rename  mar_partner_link_1995_06_xrnd   mar_partner_link14
rename  mar_partner_link_1995_07_xrnd   mar_partner_link15
rename  mar_partner_link_1995_08_xrnd   mar_partner_link16
rename  mar_partner_link_1995_09_xrnd   mar_partner_link17
rename  mar_partner_link_1995_10_xrnd   mar_partner_link18
rename  mar_partner_link_1995_11_xrnd   mar_partner_link19
rename  mar_partner_link_1995_12_xrnd   mar_partner_link20
rename  mar_partner_link_1996_01_xrnd   mar_partner_link21
rename  mar_partner_link_1996_02_xrnd   mar_partner_link22
rename  mar_partner_link_1996_03_xrnd   mar_partner_link23
rename  mar_partner_link_1996_04_xrnd   mar_partner_link24
rename  mar_partner_link_1996_05_xrnd   mar_partner_link25
rename  mar_partner_link_1996_06_xrnd   mar_partner_link26
rename  mar_partner_link_1996_07_xrnd   mar_partner_link27
rename  mar_partner_link_1996_08_xrnd   mar_partner_link28
rename  mar_partner_link_1996_09_xrnd   mar_partner_link29
rename  mar_partner_link_1996_10_xrnd   mar_partner_link30
rename  mar_partner_link_1996_11_xrnd   mar_partner_link31
rename  mar_partner_link_1996_12_xrnd   mar_partner_link32
rename  mar_partner_link_1997_01_xrnd   mar_partner_link33
rename  mar_partner_link_1997_02_xrnd   mar_partner_link34
rename  mar_partner_link_1997_03_xrnd   mar_partner_link35
rename  mar_partner_link_1997_04_xrnd   mar_partner_link36
rename  mar_partner_link_1997_05_xrnd   mar_partner_link37
rename  mar_partner_link_1997_06_xrnd   mar_partner_link38
```

```
rename  mar_partner_link_1997_07_xrnd   mar_partner_link39
rename  mar_partner_link_1997_08_xrnd   mar_partner_link40
rename  mar_partner_link_1997_09_xrnd   mar_partner_link41
rename  mar_partner_link_1997_10_xrnd   mar_partner_link42
rename  mar_partner_link_1997_11_xrnd   mar_partner_link43
rename  mar_partner_link_1997_12_xrnd   mar_partner_link44
rename  mar_partner_link_1998_01_xrnd   mar_partner_link45
rename  mar_partner_link_1998_02_xrnd   mar_partner_link46
rename  mar_partner_link_1998_03_xrnd   mar_partner_link47
rename  mar_partner_link_1998_04_xrnd   mar_partner_link48
rename  mar_partner_link_1998_05_xrnd   mar_partner_link49
rename  mar_partner_link_1998_06_xrnd   mar_partner_link50
rename  mar_partner_link_1998_07_xrnd   mar_partner_link51
rename  mar_partner_link_1998_08_xrnd   mar_partner_link52
rename  mar_partner_link_1998_09_xrnd   mar_partner_link53
rename  mar_partner_link_1998_10_xrnd   mar_partner_link54
rename  mar_partner_link_1998_11_xrnd   mar_partner_link55
rename  mar_partner_link_1998_12_xrnd   mar_partner_link56
rename  mar_partner_link_1999_01_xrnd   mar_partner_link57
rename  mar_partner_link_1999_02_xrnd   mar_partner_link58
rename  mar_partner_link_1999_03_xrnd   mar_partner_link59
rename  mar_partner_link_1999_04_xrnd   mar_partner_link60
rename  mar_partner_link_1999_05_xrnd   mar_partner_link61
rename  mar_partner_link_1999_06_xrnd   mar_partner_link62
rename  mar_partner_link_1999_07_xrnd   mar_partner_link63
rename  mar_partner_link_1999_08_xrnd   mar_partner_link64
rename  mar_partner_link_1999_09_xrnd   mar_partner_link65
rename  mar_partner_link_1999_10_xrnd   mar_partner_link66
rename  mar_partner_link_1999_11_xrnd   mar_partner_link67
rename  mar_partner_link_1999_12_xrnd   mar_partner_link68
rename  mar_partner_link_2000_01_xrnd   mar_partner_link69
rename  mar_partner_link_2000_02_xrnd   mar_partner_link70
rename  mar_partner_link_2000_03_xrnd   mar_partner_link71
rename  mar_partner_link_2000_04_xrnd   mar_partner_link72
rename  mar_partner_link_2000_05_xrnd   mar_partner_link73
rename  mar_partner_link_2000_06_xrnd   mar_partner_link74
rename  mar_partner_link_2000_07_xrnd   mar_partner_link75
rename  mar_partner_link_2000_08_xrnd   mar_partner_link76
rename  mar_partner_link_2000_09_xrnd   mar_partner_link77
rename  mar_partner_link_2000_10_xrnd   mar_partner_link78
rename  mar_partner_link_2000_11_xrnd   mar_partner_link79
rename  mar_partner_link_2000_12_xrnd   mar_partner_link80
rename  mar_partner_link_2001_01_xrnd   mar_partner_link81
rename  mar_partner_link_2001_02_xrnd   mar_partner_link82
rename  mar_partner_link_2001_03_xrnd   mar_partner_link83
rename  mar_partner_link_2001_04_xrnd   mar_partner_link84
rename  mar_partner_link_2001_05_xrnd   mar_partner_link85
rename  mar_partner_link_2001_06_xrnd   mar_partner_link86
rename  mar_partner_link_2001_07_xrnd   mar_partner_link87
rename  mar_partner_link_2001_08_xrnd   mar_partner_link88
rename  mar_partner_link_2001_09_xrnd   mar_partner_link89
rename  mar_partner_link_2001_10_xrnd   mar_partner_link90
rename  mar_partner_link_2001_11_xrnd   mar_partner_link91
rename  mar_partner_link_2001_12_xrnd   mar_partner_link92
rename  mar_partner_link_2002_01_xrnd   mar_partner_link93
rename  mar_partner_link_2002_02_xrnd   mar_partner_link94
rename  mar_partner_link_2002_03_xrnd   mar_partner_link95
rename  mar_partner_link_2002_04_xrnd   mar_partner_link96
rename  mar_partner_link_2002_05_xrnd   mar_partner_link97
rename  mar_partner_link_2002_06_xrnd   mar_partner_link98
rename  mar_partner_link_2002_07_xrnd   mar_partner_link99
rename  mar_partner_link_2002_08_xrnd   mar_partner_link100
rename  mar_partner_link_2002_09_xrnd   mar_partner_link101
rename  mar_partner_link_2002_10_xrnd   mar_partner_link102
rename  mar_partner_link_2002_11_xrnd   mar_partner_link103
rename  mar_partner_link_2002_12_xrnd   mar_partner_link104
rename  mar_partner_link_2003_01_xrnd   mar_partner_link105
rename  mar_partner_link_2003_02_xrnd   mar_partner_link106
rename  mar_partner_link_2003_03_xrnd   mar_partner_link107
rename  mar_partner_link_2003_04_xrnd   mar_partner_link108
rename  mar_partner_link_2003_05_xrnd   mar_partner_link109
rename  mar_partner_link_2003_06_xrnd   mar_partner_link110
rename  mar_partner_link_2003_07_xrnd   mar_partner_link111
rename  mar_partner_link_2003_08_xrnd   mar_partner_link112
rename  mar_partner_link_2003_09_xrnd   mar_partner_link113
rename  mar_partner_link_2003_10_xrnd   mar_partner_link114
rename  mar_partner_link_2003_11_xrnd   mar_partner_link115
rename  mar_partner_link_2003_12_xrnd   mar_partner_link116
rename  mar_partner_link_2004_01_xrnd   mar_partner_link117
rename  mar_partner_link_2004_02_xrnd   mar_partner_link118
rename  mar_partner_link_2004_03_xrnd   mar_partner_link119
rename  mar_partner_link_2004_04_xrnd   mar_partner_link120
rename  mar_partner_link_2004_05_xrnd   mar_partner_link121
rename  mar_partner_link_2004_06_xrnd   mar_partner_link122
```

```
rename  mar_partner_link_2004_07_xrnd   mar_partner_link123
rename  mar_partner_link_2004_08_xrnd   mar_partner_link124
rename  mar_partner_link_2004_09_xrnd   mar_partner_link125
rename  mar_partner_link_2004_10_xrnd   mar_partner_link126
rename  mar_partner_link_2004_11_xrnd   mar_partner_link127
rename  mar_partner_link_2004_12_xrnd   mar_partner_link128
rename  mar_partner_link_2005_01_xrnd   mar_partner_link129
rename  mar_partner_link_2005_02_xrnd   mar_partner_link130
rename  mar_partner_link_2005_03_xrnd   mar_partner_link131
rename  mar_partner_link_2005_04_xrnd   mar_partner_link132
rename  mar_partner_link_2005_05_xrnd   mar_partner_link133
rename  mar_partner_link_2005_06_xrnd   mar_partner_link134
rename  mar_partner_link_2005_07_xrnd   mar_partner_link135
rename  mar_partner_link_2005_08_xrnd   mar_partner_link136
rename  mar_partner_link_2005_09_xrnd   mar_partner_link137
rename  mar_partner_link_2005_10_xrnd   mar_partner_link138
rename  mar_partner_link_2005_11_xrnd   mar_partner_link139
rename  mar_partner_link_2005_12_xrnd   mar_partner_link140
rename  mar_partner_link_2006_01_xrnd   mar_partner_link141
rename  mar_partner_link_2006_02_xrnd   mar_partner_link142
rename  mar_partner_link_2006_03_xrnd   mar_partner_link143
rename  mar_partner_link_2006_04_xrnd   mar_partner_link144
rename  mar_partner_link_2006_05_xrnd   mar_partner_link145
rename  mar_partner_link_2006_06_xrnd   mar_partner_link146
rename  mar_partner_link_2006_07_xrnd   mar_partner_link147
rename  mar_partner_link_2006_08_xrnd   mar_partner_link148
rename  mar_partner_link_2006_09_xrnd   mar_partner_link149
rename  mar_partner_link_2006_10_xrnd   mar_partner_link150
rename  mar_partner_link_2006_11_xrnd   mar_partner_link151
rename  mar_partner_link_2006_12_xrnd   mar_partner_link152
rename  mar_partner_link_2007_01_xrnd   mar_partner_link153
rename  mar_partner_link_2007_02_xrnd   mar_partner_link154
rename  mar_partner_link_2007_03_xrnd   mar_partner_link155
rename  mar_partner_link_2007_04_xrnd   mar_partner_link156
rename  mar_partner_link_2007_05_xrnd   mar_partner_link157
rename  mar_partner_link_2007_06_xrnd   mar_partner_link158
rename  mar_partner_link_2007_07_xrnd   mar_partner_link159
rename  mar_partner_link_2007_08_xrnd   mar_partner_link160
rename  mar_partner_link_2007_09_xrnd   mar_partner_link161
rename  mar_partner_link_2007_10_xrnd   mar_partner_link162
rename  mar_partner_link_2007_11_xrnd   mar_partner_link163
rename  mar_partner_link_2007_12_xrnd   mar_partner_link164
rename  mar_partner_link_2008_01_xrnd   mar_partner_link165
rename  mar_partner_link_2008_02_xrnd   mar_partner_link166
rename  mar_partner_link_2008_03_xrnd   mar_partner_link167
rename  mar_partner_link_2008_04_xrnd   mar_partner_link168
rename  mar_partner_link_2008_05_xrnd   mar_partner_link169
rename  mar_partner_link_2008_06_xrnd   mar_partner_link170
rename  mar_partner_link_2008_07_xrnd   mar_partner_link171
rename  mar_partner_link_2008_08_xrnd   mar_partner_link172
rename  mar_partner_link_2008_09_xrnd   mar_partner_link173
rename  mar_partner_link_2008_10_xrnd   mar_partner_link174
rename  mar_partner_link_2008_11_xrnd   mar_partner_link175
rename  mar_partner_link_2008_12_xrnd   mar_partner_link176
rename  mar_partner_link_2009_01_xrnd   mar_partner_link177
rename  mar_partner_link_2009_02_xrnd   mar_partner_link178
rename  mar_partner_link_2009_03_xrnd   mar_partner_link179
rename  mar_partner_link_2009_04_xrnd   mar_partner_link180
rename  mar_partner_link_2009_05_xrnd   mar_partner_link181
rename  mar_partner_link_2009_06_xrnd   mar_partner_link182
rename  mar_partner_link_2009_07_xrnd   mar_partner_link183
rename  mar_partner_link_2009_08_xrnd   mar_partner_link184
rename  mar_partner_link_2009_09_xrnd   mar_partner_link185
rename  mar_partner_link_2009_10_xrnd   mar_partner_link186
rename  mar_partner_link_2009_11_xrnd   mar_partner_link187
rename  mar_partner_link_2009_12_xrnd   mar_partner_link188
rename  mar_partner_link_2010_01_xrnd   mar_partner_link189
rename  mar_partner_link_2010_02_xrnd   mar_partner_link190
rename  mar_partner_link_2010_03_xrnd   mar_partner_link191
rename  mar_partner_link_2010_04_xrnd   mar_partner_link192
rename  mar_partner_link_2010_05_xrnd   mar_partner_link193
rename  mar_partner_link_2010_06_xrnd   mar_partner_link194
rename  mar_partner_link_2010_07_xrnd   mar_partner_link195
rename  mar_partner_link_2010_08_xrnd   mar_partner_link196
rename  mar_partner_link_2010_09_xrnd   mar_partner_link197
rename  mar_partner_link_2010_10_xrnd   mar_partner_link198
rename  mar_partner_link_2010_11_xrnd   mar_partner_link199
rename  mar_partner_link_2010_12_xrnd   mar_partner_link200
rename  mar_partner_link_2011_01_xrnd   mar_partner_link201
rename  mar_partner_link_2011_02_xrnd   mar_partner_link202
rename  mar_partner_link_2011_03_xrnd   mar_partner_link203
rename  mar_partner_link_2011_04_xrnd   mar_partner_link204
rename  mar_partner_link_2011_05_xrnd   mar_partner_link205
rename  mar_partner_link_2011_06_xrnd   mar_partner_link206
```

```
rename  mar_partner_link_2011_07_xrnd   mar_partner_link207
rename  mar_partner_link_2011_08_xrnd   mar_partner_link208
rename  mar_partner_link_2011_09_xrnd   mar_partner_link209
rename  mar_partner_link_2011_10_xrnd   mar_partner_link210
rename  mar_partner_link_2011_11_xrnd   mar_partner_link211
rename  mar_partner_link_2011_12_xrnd   mar_partner_link212
rename  mar_partner_link_2012_01_xrnd   mar_partner_link213
rename  mar_partner_link_2012_02_xrnd   mar_partner_link214
rename  mar_partner_link_2012_03_xrnd   mar_partner_link215
rename  mar_partner_link_2012_04_xrnd   mar_partner_link216
rename  mar_partner_link_2012_05_xrnd   mar_partner_link217
rename  mar_partner_link_2012_06_xrnd   mar_partner_link218
rename  mar_partner_link_2012_07_xrnd   mar_partner_link219
rename  mar_partner_link_2012_08_xrnd   mar_partner_link220
rename  mar_partner_link_2012_09_xrnd   mar_partner_link221
rename  mar_partner_link_2012_10_xrnd   mar_partner_link222
rename  mar_partner_link_2012_11_xrnd   mar_partner_link223
rename  mar_partner_link_2012_12_xrnd   mar_partner_link224
rename  mar_partner_link_2013_01_xrnd   mar_partner_link225
rename  mar_partner_link_2013_02_xrnd   mar_partner_link226
rename  mar_partner_link_2013_03_xrnd   mar_partner_link227
rename  mar_partner_link_2013_04_xrnd   mar_partner_link228
rename  mar_partner_link_2013_05_xrnd   mar_partner_link229
rename  mar_partner_link_2013_06_xrnd   mar_partner_link230
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rename  mar_partner_link_2014_02_xrnd   mar_partner_link238
rename  mar_partner_link_2014_03_xrnd   mar_partner_link239
rename  mar_partner_link_2014_04_xrnd   mar_partner_link240
rename  mar_partner_link_2014_05_xrnd   mar_partner_link241
rename  mar_partner_link_2014_06_xrnd   mar_partner_link242
rename  mar_partner_link_2014_07_xrnd   mar_partner_link243


***************
* reshape the data
***************

reshape long mar_partner_link, i(pubid) j(index)




*****************
* Merge with the index data
*****************

sort index
merge m:1 index using "F:\nlsy workshop\index.dta"



******************
* find the first partner
******************

sort pubid index
gen partner = 1 if inrange(mar_partner_link,101,1602)
by pubid:  gen i_partner = sum(partner)
by pubid: egen s_partner = sum(partner)

gen firstpid_temp =.
gen month1cohab_temp =.
gen coh_month_temp = .
gen coh_year_temp =  .

by pubid: replace firstpid_temp = mar_partner_link      if partner ==1 & i_partner ==1
by pubid: replace month1cohab_temp = 1                  if partner ==1 & i_partner ==1
by pubid: replace coh_month_temp = month                if partner ==1 & i_partner ==1
by pubid: replace coh_year_temp = year                  if partner ==1 & i_partner ==1


by pubid: egen firstpid    = max(firstpid_temp)
by pubid: egen month1cohab = max(month1cohab_temp)
by pubid: egen coh_month   = max(coh_month_temp)
by pubid: egen coh_year    = max(coh_year_temp)
```

```
*******************************
* Create the variable withinrnd and round
*******************************

gen withinrnd =  mod(firstpid,100)
gen round     = (firstpid - withinrnd)/100
gen pid_order =withinrnd

*********************************************************
* save the data: only 6,739 people had the first partner
*********************************************************


save "F:\nlsy workshop\mar_partner_link.dta", replace

keep if index ==1
keep pubid_1997 round pid_order
sort pubid_1997 round pid_order

gen ptnr = .
replace ptnr = 0 if round ==.
replace ptnr = 1 if round ~=.

count
sum round pid_order ptnr
save "F:\nlsy workshop\first_partner.dta", replace




*****************************************************************************
* 3.3. This command file construct the age variable from the household roster
*****************************************************************************

*************************
* Create the index
*************************
import excel "F:\nlsy workshop\index.xlsx", sheet("index for hhuid") firstrow clear
sort index
save "F:\nlsy workshop\index for hhuid.dta", replace



***********************************
* Linking the age for people in the household
***********************************

use "F:\nlsy workshop\cohabit_ptnr\cohabit_ptnr.dta", clear
keep PUBID HHI*UID* HHI*AGE*
rename *, lower

rename  hhi2_uid_01_1997        hhiuid1
rename  hhi2_uid_02_1997        hhiuid2
rename  hhi2_uid_03_1997        hhiuid3
rename  hhi2_uid_04_1997        hhiuid4
rename  hhi2_uid_05_1997        hhiuid5
rename  hhi2_uid_06_1997        hhiuid6
rename  hhi2_uid_07_1997        hhiuid7
rename  hhi2_uid_08_1997        hhiuid8
rename  hhi2_uid_09_1997        hhiuid9
rename  hhi2_uid_10_1997        hhiuid10
rename  hhi2_uid_11_1997        hhiuid11
rename  hhi2_uid_12_1997        hhiuid12
rename  hhi2_uid_13_1997        hhiuid13
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rename  hhi2_uid_16_1997        hhiuid16
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rename  hhi_uid_13_1998 hhiuid30
rename  hhi_uid_14_1998 hhiuid31
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rename  hhi_age_03_2009 hhiage167
rename  hhi_age_04_2009 hhiage168
rename  hhi_age_05_2009 hhiage169
rename  hhi_age_06_2009 hhiage170
rename  hhi_age_07_2009 hhiage171
rename  hhi_age_08_2009 hhiage172
rename  hhi_age_09_2009 hhiage173
rename  hhi_age_10_2009 hhiage174
rename  hhi_age_11_2009 hhiage175
rename  hhi_age_12_2009 hhiage176
rename  hhi_age_13_2009 hhiage177
rename  hhi_age_14_2009 hhiage178
rename  hhi_age_15_2009 hhiage179
rename  hhi_age_16_2009 hhiage180
rename  hhi_age_17_2009 hhiage181
rename  hhi_age_18_2009 hhiage182
rename  hhi_age_01_2010 hhiage183
rename  hhi_age_02_2010 hhiage184
rename  hhi_age_03_2010 hhiage185
rename  hhi_age_04_2010 hhiage186
rename  hhi_age_05_2010 hhiage187
rename  hhi_age_06_2010 hhiage188
rename  hhi_age_07_2010 hhiage189
rename  hhi_age_08_2010 hhiage190
rename  hhi_age_09_2010 hhiage191
rename  hhi_age_10_2010 hhiage192
rename  hhi_age_11_2010 hhiage193
rename  hhi_age_12_2010 hhiage194
rename  hhi_age_13_2010 hhiage195
rename  hhi_age_14_2010 hhiage196
rename  hhi_age_15_2010 hhiage197
rename  hhi_age_01_2011 hhiage198
rename  hhi_age_02_2011 hhiage199
rename  hhi_age_03_2011 hhiage200
rename  hhi_age_04_2011 hhiage201
rename  hhi_age_05_2011 hhiage202
rename  hhi_age_06_2011 hhiage203
rename  hhi_age_07_2011 hhiage204
rename  hhi_age_08_2011 hhiage205
rename  hhi_age_09_2011 hhiage206
rename  hhi_age_10_2011 hhiage207
rename  hhi_age_11_2011 hhiage208
rename  hhi_age_12_2011 hhiage209
rename  hhi_age_13_2011 hhiage210
rename  hhi_age_14_2011 hhiage211
rename  hhi_age_01_2013 hhiage212
rename  hhi_age_02_2013 hhiage213
rename  hhi_age_03_2013 hhiage214
rename  hhi_age_04_2013 hhiage215
rename  hhi_age_05_2013 hhiage216
rename  hhi_age_06_2013 hhiage217
rename  hhi_age_07_2013 hhiage218
rename  hhi_age_08_2013 hhiage219
rename  hhi_age_09_2013 hhiage220
rename  hhi_age_10_2013 hhiage221
rename  hhi_age_11_2013 hhiage222
rename  hhi_age_12_2013 hhiage223


reshape long hhiuid hhiage, i(pubid) j(index)
```

```
sort index

merge m:1 index using "F:\nlsy workshop\index for hhuid.dta"

drop _merge


gen round = year
recode round ( 1997 = 1) ( 1998 = 2) (1999 = 3) (2000 = 4) (2001 = 5) ///
(2002 = 6) (2003 = 7) (2004 = 8) (2005 = 9) (2006 = 10) (2007 = 11) ///
(2008 = 12) (2009 = 13) (2010 = 14) (2011 = 15) (2013 = 16)

keep pubid_1997 round hhiuid hhiage hhi_order
gen puid = hhiuid if inrange(hhiuid,1,9999999)
sort pubid_1997 round puid
save "F:\nlsy workshop\hhiage.dta", replace



*******************************************************************************
* 3.4 This command file construct the age variable from the non-resident roster
*******************************************************************************

use "F:\nlsy workshop\cohabit_ptnr\cohabit_ptnr.dta", clear
keep PUBID NON*UID* NON*AGE*
rename *, lower



*********************
* rename variable
*********************
rename  nonhhi_uid_01_1997      nonuid1
rename  nonhhi_uid_02_1997      nonuid2
rename  nonhhi_uid_03_1997      nonuid3
rename  nonhhi_uid_04_1997      nonuid4
rename  nonhhi_uid_05_1997      nonuid5
rename  nonhhi_uid_06_1997      nonuid6
rename  nonhhi_uid_07_1997      nonuid7
rename  nonhhi_uid_08_1997      nonuid8
rename  nonhhi_uid_09_1997      nonuid9
rename  nonhhi_uid_10_1997      nonuid10
rename  nonhhi_uid_11_1997      nonuid11
rename  nonhhi_uid_12_1997      nonuid12
rename  nonhhi_uid_13_1997      nonuid13
rename  nonhhi_uid_14_1997      nonuid14
rename  nonhhi_uid_15_1997      nonuid15
rename  nonhhi_uid_16_1997      nonuid16
rename  nonhhi_uid_17_1997      nonuid17
rename  nonhhi_uid_18_1997      nonuid18
rename  nonhhi_uid_19_1997      nonuid19
rename  nonhhi_uid_20_1997      nonuid20
rename  nonhhi_uid_21_1997      nonuid21
rename  nonhhi_uid_22_1997      nonuid22
rename  nonhhi_uid_23_1997      nonuid23


rename  nonhhi_age_01_1997      nonage1
rename  nonhhi_age_02_1997      nonage2
rename  nonhhi_age_03_1997      nonage3
rename  nonhhi_age_04_1997      nonage4
rename  nonhhi_age_05_1997      nonage5
rename  nonhhi_age_06_1997      nonage6
rename  nonhhi_age_07_1997      nonage7
rename  nonhhi_age_08_1997      nonage8
rename  nonhhi_age_09_1997      nonage9
rename  nonhhi_age_10_1997      nonage10
rename  nonhhi_age_11_1997      nonage11
rename  nonhhi_age_12_1997      nonage12
rename  nonhhi_age_13_1997      nonage13
rename  nonhhi_age_14_1997      nonage14
rename  nonhhi_age_15_1997      nonage15
rename  nonhhi_age_16_1997      nonage16
rename  nonhhi_age_17_1997      nonage17
rename  nonhhi_age_18_1997      nonage18
rename  nonhhi_age_19_1997      nonage19
rename  nonhhi_age_20_1997      nonage20
rename  nonhhi_age_21_1997      nonage21
rename  nonhhi_age_22_1997      nonage22
gen nonage23 =.
gen round = 1

*********************
```

```
* reshape data
**********************

reshape long nonuid nonage, i(pubid) j(index)

gen puid = nonuid if inrange(nonuid, 1,9999999)

order pubid_1997 round nonuid nonage
sort pubid_1997 round puid

save "F:\nlsy workshop\nonage.dta", replace


*******************************************************************************
* 3.5 This command file construct the postion that a spouse/partner holds at a time
*******************************************************************************

import excel "F:\nlsy workshop\index.xlsx", sheet("index for pid") firstrow clear
count
sort index
save "F:\nlsy workshop\index for pid.dta", replace



************************************
use "F:\nlsy workshop\cohabit_ptnr\cohabit_ptnr.dta", clear
rename *, lower

keep pubid partners_id_*

rename  partners_id_01_1997     pid1
rename  partners_id_02_1997     pid2
rename  partners_id_01_1998     pid3
rename  partners_id_02_1998     pid4
rename  partners_id_03_1998     pid5
rename  partners_id_01_1999     pid6
rename  partners_id_02_1999     pid7
rename  partners_id_01_2000     pid8
rename  partners_id_02_2000     pid9
rename  partners_id_03_2000     pid10
rename  partners_id_04_2000     pid11
rename  partners_id_01_2001     pid12
rename  partners_id_02_2001     pid13
rename  partners_id_03_2001     pid14
rename  partners_id_04_2001     pid15
rename  partners_id_01_2002     pid16
rename  partners_id_02_2002     pid17
rename  partners_id_03_2002     pid18
rename  partners_id_01_2003     pid19
rename  partners_id_02_2003     pid20
rename  partners_id_03_2003     pid21
rename  partners_id_01_2004     pid22
rename  partners_id_02_2004     pid23
rename  partners_id_03_2004     pid24
rename  partners_id_01_2005     pid25
rename  partners_id_02_2005     pid26
rename  partners_id_03_2005     pid27
rename  partners_id_04_2005     pid28
rename  partners_id_01_2006     pid29
rename  partners_id_02_2006     pid30
rename  partners_id_03_2006     pid31
rename  partners_id_01_2007     pid32
rename  partners_id_02_2007     pid33
rename  partners_id_03_2007     pid34
rename  partners_id_01_2008     pid35
rename  partners_id_02_2008     pid36
rename  partners_id_03_2008     pid37
rename  partners_id_04_2008     pid38
rename  partners_id_01_2009     pid39
rename  partners_id_02_2009     pid40
rename  partners_id_03_2009     pid41
rename  partners_id_01_2010     pid42
rename  partners_id_02_2010     pid43
rename  partners_id_03_2010     pid44
rename  partners_id_01_2011     pid45
rename  partners_id_02_2011     pid46
rename  partners_id_03_2011     pid47
rename  partners_id_01_2013     pid48
rename  partners_id_02_2013     pid49
rename  partners_id_03_2013     pid50

reshape long pid, i(pubid) j(index)

sort index
```

```
merge m:1 index using "F:\nlsy workshop\index for pid.dta"
drop _merge

sort pubid year pid_order
drop index

gen round = year
recode round ( 1997 = 1) ( 1998 = 2) (1999 = 3) (2000 = 4) (2001 = 5) (2002 = 6) ///
(2003 = 7) (2004 = 8) (2005 = 9) (2006 = 10) (2007 = 11) (2008 = 12) (2009 = 13) ///
(2010 = 14) (2011 = 15) (2013 = 16)



keep pubid_1997 round pid_order pid

order pubid_1997 round pid_order pid


sort pubid_1997 round pid_order
save "F:\nlsy workshop\pid.dta", replace



*******************************************************************************
* 3.6 This command file construct the unique ID for spouse/partners in NLSY97
*******************************************************************************

import excel "F:\nlsy workshop\index.xlsx", sheet("index for puid") firstrow clear
sort index
save "F:\nlsy workshop\index for puid.dta", replace

****************************
use "F:\nlsy workshop\cohabit_ptnr\cohabit_ptnr.dta", clear
rename *, lower
keep pubid partners_uid_*

rename  partners_uid_01_1997    puid1
rename  partners_uid_02_1997    puid2
rename  partners_uid_01_1998    puid3
rename  partners_uid_02_1998    puid4
rename  partners_uid_01_1999    puid5
rename  partners_uid_02_1999    puid6
rename  partners_uid_01_2000    puid7
rename  partners_uid_02_2000    puid8
rename  partners_uid_04_2000    puid9
rename  partners_uid_01_2001    puid10
rename  partners_uid_02_2001    puid11
rename  partners_uid_01_2002    puid12
rename  partners_uid_02_2002    puid13
rename  partners_uid_03_2002    puid14
rename  partners_uid_01_2003    puid15
rename  partners_uid_02_2003    puid16
rename  partners_uid_01_2004    puid17
rename  partners_uid_02_2004    puid18
rename  partners_uid_03_2004    puid19
rename  partners_uid_01_2005    puid20
rename  partners_uid_02_2005    puid21
rename  partners_uid_03_2005    puid22
rename  partners_uid_04_2005    puid23
rename  partners_uid_01_2006    puid24
rename  partners_uid_02_2006    puid25
rename  partners_uid_03_2006    puid26
rename  partners_uid_01_2007    puid27
rename  partners_uid_02_2007    puid28
rename  partners_uid_03_2007    puid29
rename  partners_uid_01_2008    puid30
rename  partners_uid_02_2008    puid31
rename  partners_uid_03_2008    puid32
rename  partners_uid_04_2008    puid33
rename  partners_uid_01_2009    puid34
rename  partners_uid_02_2009    puid35
rename  partners_uid_03_2009    puid36
rename  partners_uid_01_2010    puid37
rename  partners_uid_02_2010    puid38
rename  partners_uid_03_2010    puid39
rename  partners_uid_01_2011    puid40
rename  partners_uid_02_2011    puid41
rename  partners_uid_03_2011    puid42
rename  partners_uid_01_2013    puid43
rename  partners_uid_02_2013    puid44
rename  partners_uid_03_2013    puid45

reshape long puid, i(pubid) j(index)
```

```
sort index
merge m:1 index using "F:\nlsy workshop\index for puid.dta"
drop _merge
sort pubid index


order pubid_1997 year puid_order index puid

sort pubid_1997 year puid_order

gen round = year
recode round ( 1997 = 1) ( 1998 = 2) (1999 = 3) (2000 = 4) (2001 = 5) (2002 = 6) ///
(2003 = 7) (2004 = 8) (2005 = 9) (2006 = 10) (2007 = 11) (2008 = 12) (2009 = 13) ///
(2010 = 14) (2011 = 15) (2013 = 16)

gen pid_order =  puid_order

keep pubid_1997 puid round pid_order

order pubid_1997 round pid_order puid
sort pubid_1997 round pid_order

save "F:\nlsy workshop\puid.dta", replace


*************************************************************************
* 3.7 This command file construct the age variable for spouse/partners in NLSY97
*************************************************************************
set more 1
**********************************

import excel "F:\nlsy workshop\index.xlsx", sheet("index for YMAR") firstrow clear
count
sort index
save "F:\nlsy workshop\index for ymar.dta", replace



************************************
use "F:\nlsy workshop\cohabit_ptnr\cohabit_ptnr.dta", clear
rename *, lower

keep pubid ymar_3200*

des

************************************
rename  ymar_3200_01_1997       page1
rename  ymar_3200_02_1997       page2
rename  ymar_3200_01_1998       page3
rename  ymar_3200_02_1998       page4
rename  ymar_3200_03_1998       page5
rename  ymar_3200_01_1999       page6
rename  ymar_3200_02_1999       page7
rename  ymar_3200_01_2000       page8
rename  ymar_3200_02_2000       page9
rename  ymar_3200_03_2000       page10
rename  ymar_3200_04_2000       page11
rename  ymar_3200_01_2001       page12
rename  ymar_3200_02_2001       page13
rename  ymar_3200_03_2001       page14
rename  ymar_3200_04_2001       page15
rename  ymar_3200_01_2002       page16
rename  ymar_3200_02_2002       page17
rename  ymar_3200_03_2002       page18
rename  ymar_3200_01_2003       page19
rename  ymar_3200_02_2003       page20
rename  ymar_3200_03_2003       page21
rename  ymar_3200_01_2004       page22
rename  ymar_3200_02_2004       page23
rename  ymar_3200_03_2004       page24
rename  ymar_3200_01_2005       page25
rename  ymar_3200_02_2005       page26
rename  ymar_3200_03_2005       page27
rename  ymar_3200_04_2005       page28
rename  ymar_3200_01_2006       page29
rename  ymar_3200_02_2006       page30
rename  ymar_3200_03_2006       page31
rename  ymar_3200_01_2007       page32
rename  ymar_3200_02_2007       page33
rename  ymar_3200_01_2008       page34
rename  ymar_3200_02_2008       page35
```

```
rename  ymar_3200_03_2008       page36
rename  ymar_3200_04_2008       page37
rename  ymar_3200_01_2009       page38
rename  ymar_3200_02_2009       page39
rename  ymar_3200_03_2009       page40
rename  ymar_3200_01_2010       page41
rename  ymar_3200_02_2010       page42
rename  ymar_3200_03_2010       page43
rename  ymar_3200_01_2011       page44
rename  ymar_3200_02_2011       page45
rename  ymar_3200_03_2011       page46
rename  ymar_3200_01_2013       page47
rename  ymar_3200_02_2013       page48
rename  ymar_3200_03_2013       page49


reshape long page, i(pubid) j(index)


sort index
merge m:1 index using "F:\nlsy workshop\index for ymar.dta"


gen round = year
recode round ( 1997 = 1) ( 1998 = 2) (1999 = 3) (2000 = 4) (2001 = 5) (2002 = 6) ///
(2003 = 7) (2004 = 8) (2005 = 9) (2006 = 10) (2007 = 11) (2008 = 12) (2009 = 13) ///
(2010 = 14) (2011 = 15) (2013 = 16)


keep pubid_1997 round pid_order page
order pubid_1997 round pid_order page
sort pubid_1997 round pid
save "F:\nlsy workshop\ymar.dta", replace



*******************************************************************************
* 3.8 This command file merge the age variable from all three sources of data
*******************************************************************************

use "F:\nlsy workshop\pid.dta" , clear


sort pubid_1997 round pid_order
merge 1:1 pubid_1997 round pid_order using "F:\nlsy workshop\puid.dta"
rename _merge merge1
label define merge1 1 "pid only" 3"pid and puid"
label value merge1 merge1


sort pubid_1997 round pid_order
merge 1:1 pubid_1997 round pid_order using "F:\nlsy workshop\ymar.dta"
rename _merge merge2

tab2 merge1 merge2


****************************************
* Out of 449,200 records
* we had 41,696 UIDs and 11,472 ages
****************************************

duplicates report pubid_1997 round pid_order
count if inrange(puid,1,201306)
count if inrange(puid,1,201306)


************************
* mergeing with the first partner data
************************

sort pubid_1997 round pid_order
save "F:\nlsy workshop\pid_puid_ymar.dta" , replace



*****************************
* Use the first partner data to merge the pid data
*****************************

use "F:\nlsy workshop\first_partner.dta", clear
merge 1:1 pubid_1997 round pid_order using "F:\nlsy workshop\pid_puid_ymar.dta"

keep if inlist(_merge, 1,3)
```

```
drop _merge
count

gen age1 = page
label variable age1 "age from the marriage and cohabitation section"

*****************************
* Add HHIAGE data
* 5,072 can be matched
*****************************


sort pubid_1997 round puid

merge 1:m pubid_1997 round puid using "F:\nlsy workshop\hhiage.dta"

keep if inlist(_merge, 1,3)
drop _merge

gen age2 = hhiage
label variable age2 "age from household residents"


**********************
* Add NONAage
*********************
sort pubid_1997 round puid
merge 1:m pubid_1997 round puid using "F:\nlsy workshop\nonage.dta"

keep if inlist(_merge, 1,3)
drop _merge

gen age3 = nonage
label variable age3 "age from non-residents"


*****************
* Age pattern
*****************

gen str1 age_p1 ="."
gen str2 age_p2 = "."
gen str3 age_p3 = "."


replace age_p1 = "m" if inrange(age1,0,100)
replace age_p2 = "h" if inrange(age2,0,100)
replace age_p3 = "n" if inrange(age3,0,100)


gen age_pattern = age_p1 + age_p2 + age_p3
tab1 age_pattern, mis


*******************************************************************************
* check the number of respondents that had both valid UIDs and Ages for partner
*******************************************************************************

tab2 age_pattern ptnr, mis

save "F:\nlsy workshop\ptnrage.dta", replace
```