

**Randall J. Olsen**  
Professor of Economics Emeritus and  
Senior Research Scientist  
Center for Human Resource Research

## Thoughts on Periodicity Research Based on the NLS



**Center for Human Resource Research**  
The Ohio State University  
Survey Design • GIS • Survey Management • Data Cleaning • Telephony • Database Management

# Periodicity and the NLS

- Mature Men (45-59 in 1966) – Census collected under Title 13
  - Personal 1966,67. Mail 1968, personal 1969, 1971 then started a pattern of skip a year, telephone, skip a year, telephone, personal (1976) and repeat (personal 1981) but DOL/ETA ended the survey after the 1983 phone effort.
  - In 1990, NIA funded the final interview in 1990. After 7 years, Census was able to interview over 82% of the living respondents or, for those deceased, their widows or next of kin.
- Young Men (14-24 in 1966) - Census collected under Title 13
  - Personal 1966-71 then the pattern of skip a year, telephone, skip a year, telephone, personal. This cycle was repeated, ending in the personal visit in 1981, after which DOL/ETA ended the survey.
- Mature Women (30-44 in 1967) – Census collected under Title 13
  - Yearly 1967-69 (mail in 1968). Not fielded in 1970 to avoid conflict with decennial.
  - Personal in 1971 & 1972 then skip a year, telephone, skip a year, telephone, personal. Same 5 year pattern repeated twice ending 1987. Then personal in 1989, 1992 and 1995 when it was merged with the Young Women. Then every other year through 2003.
  - Computer assisted 2001 and 2003



**Center for Human Resource Research**

The Ohio State University

Survey Design • GIS • Survey Management • Data Cleaning • Telephony • Database Management

# Periodicity (cont.)

- Young Women (14-24 in 1968) – Census collected under Title 13
  - Yearly 1968-73
  - From 1975 – 1988, after in-person skip a year, telephone, skip a year, telephone, personal. Having a telephone before an in-person round allowed Census to update locating information.
  - Personal 1991, 1993, ... 2003. Not fielded in 1990 to avoid conflict with decennial. Fielded jointly with Mature Women in odd-numbered years from 1995-2003 as a cost saving measure.
- NLSY79 (born 1957-64) – Collected by NORC
  - Yearly 1979-94; recall experiment done in 1994
  - Every other year starting in 1996
  - Computer assisted starting in 1993; mode effect (computer vs paper) RCT experiments in 1989 & 1990
  - Moved to primarily phone in 2002 with a virtual call center & completely re-configured incentive structure
- NLSY97 (born 1980-84) – Collected by NORC
  - Yearly 1997- 2011, then every other year. Primarily telephone starting 2017.

# Periodicity (cont.)

- Children of the NLSY9 (born to women in NLSY79) – Collected by NORC
  - Every other year since 1986
  - Every 4 years once they reach 30



**Center for Human Resource Research**

The Ohio State University

Survey Design • GIS • Survey Management • Data Cleaning • Telephony • Database Management

# 1994 Recall Experiment

- A nearly constant NLS budget in current dollars and steadily rising field costs forced the project to end yearly interviewing for the NLSY79. This experiment was to assess the impact, but there was no feasible option except to interview every other year.
- The experiment focused on the detailed event history data on employment and program recipiency as these were core questions for the survey that would likely be affected by recall problems.
- We randomly selected 900 respondents who had completed the interview in both rounds 14 and 15 (1992 & 1993). These respondents were asked to answer the event history questions covering not the time since the 1993 interview, but since the 1992 interview.



# Experimental Outcomes

- We used the answers given in 1993 about events between the 1992 and 1993 interviews as being correct and to be compared to those same events that respondents reported on again at the 1994 interview.
- Overall, the results were what most would have expected. The event history on employment using a two year recall period was accurate except for instances when the respondent held short term jobs, which were sometimes overlooked. With a longer recall period, about 10% fewer jobs were reported.



**Center for Human Resource Research**

The Ohio State University

Survey Design • GIS • Survey Management • Data Cleaning • Telephony • Database Management

# Outcomes (cont.)

- For job gaps, a longer recall period reduced the number reported. The difference was small but statistically significant.
- Recipiency, such as AFDC & Food Stamps also had recall problems with less recipiency reported with a longer recall period. Receipt of unemployment insurance also had recall error. Like AFDC and Food Stamps, recall led to less program recipiency being reported.
- In other studies, we have seen that respondents will deny having received AFDC even though they were sampled from administrative data on who received AFDC checks. So, people are pre-disposed to under-report recipiency, and a longer recall period encouraged just that.



**Center for Human Resource Research**

The Ohio State University

Survey Design • GIS • Survey Management • Data Cleaning • Telephony • Database Management

# Effect on Respondents

- All guessed we would have fewer problems with attrition with lower frequency as the overall burden would be lower. This was not correct.
- While not a disaster, attrition **accelerated** markedly.
- Why this happened is open to speculation. Reduced frequency may have signaled the sponsor had lost interest.
- Lower frequency may have reduced the importance of the project in the respondents' eyes.
- This, and continuing cost pressure, led us to use more aggressive respondent fees in 2000 and then reconfigure data collection in 2002 with respondent fees that paid respondents more to behave pro-socially – higher fee if you call us rather than having us call you.



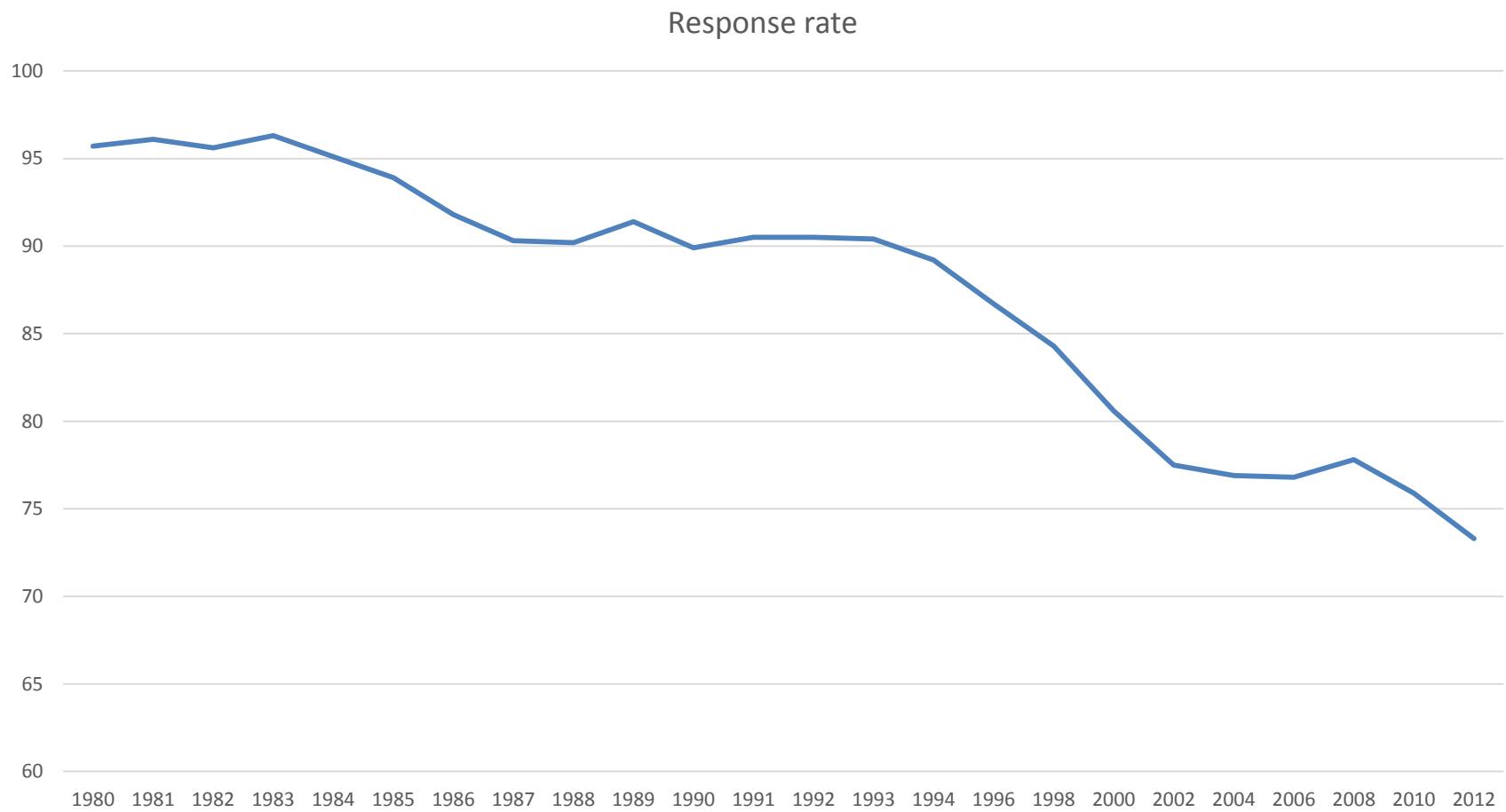
**Center for Human Resource Research**

The Ohio State University

Survey Design • GIS • Survey Management • Data Cleaning • Telephony • Database Management

# Response Rates over Time

## NLSY79



# Any Unifying Themes Here?

- Interview periodicity has been driven by the underlying research agenda. For the original (Census) cohorts, the emphasis was on the longer term – why older men withdrew from the labor force, how mothers re-entered the labor force, and how young people negotiated the school to work transition. For the Children of the NLSY, the emphasis was on how early childhood and its many contextual factors influenced their social, emotional and cognitive development and ability to establish themselves as adults. Less frequent periodicity was consistent with these goals.
- For the NLSY79 and NLSY97 the emphasis was on higher frequency labor force movements, especially in adolescence when so many things were going on.



**Center for Human Resource Research**

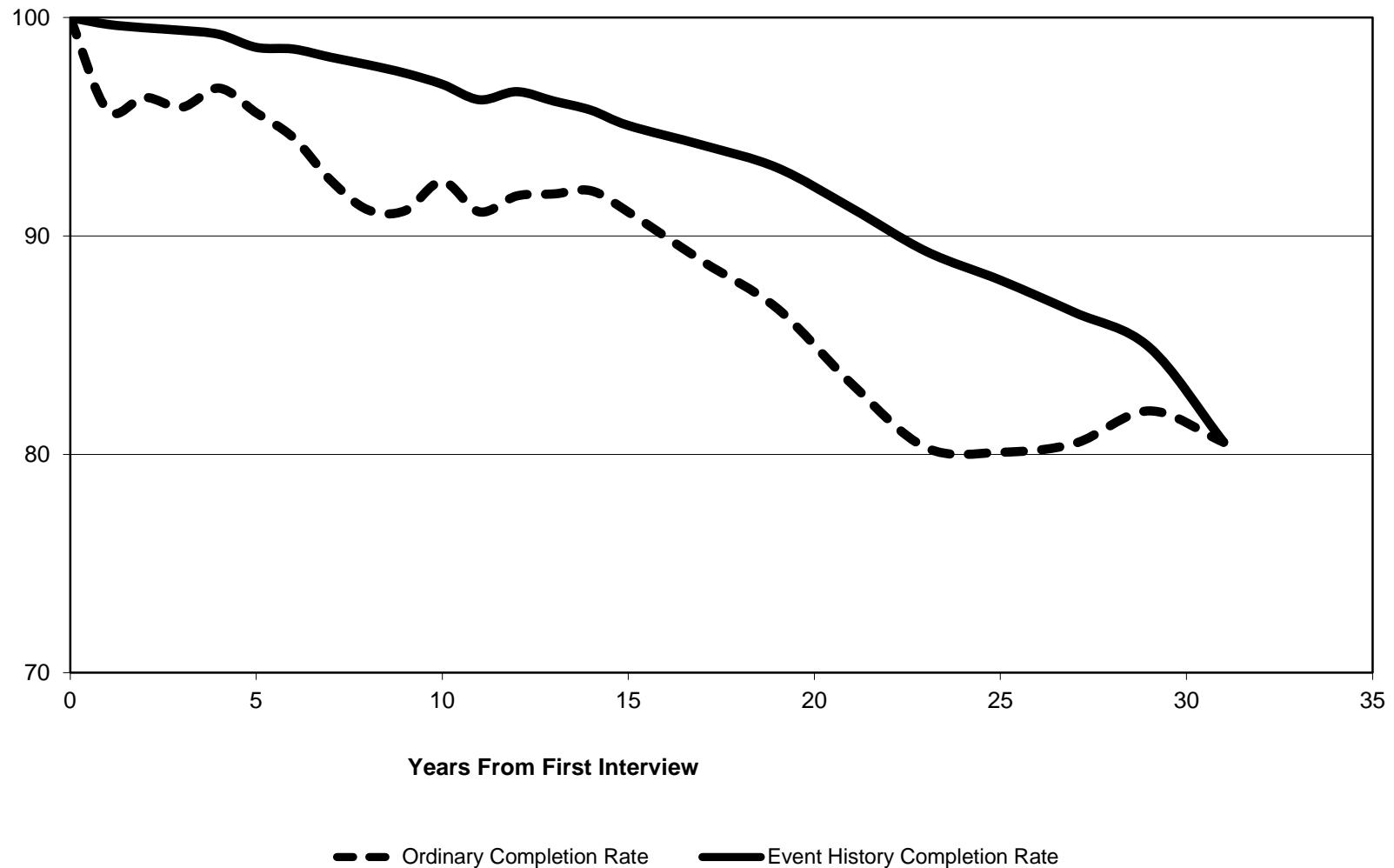
The Ohio State University

Survey Design • GIS • Survey Management • Data Cleaning • Telephony • Database Management

## Unifying Themes (cont.)

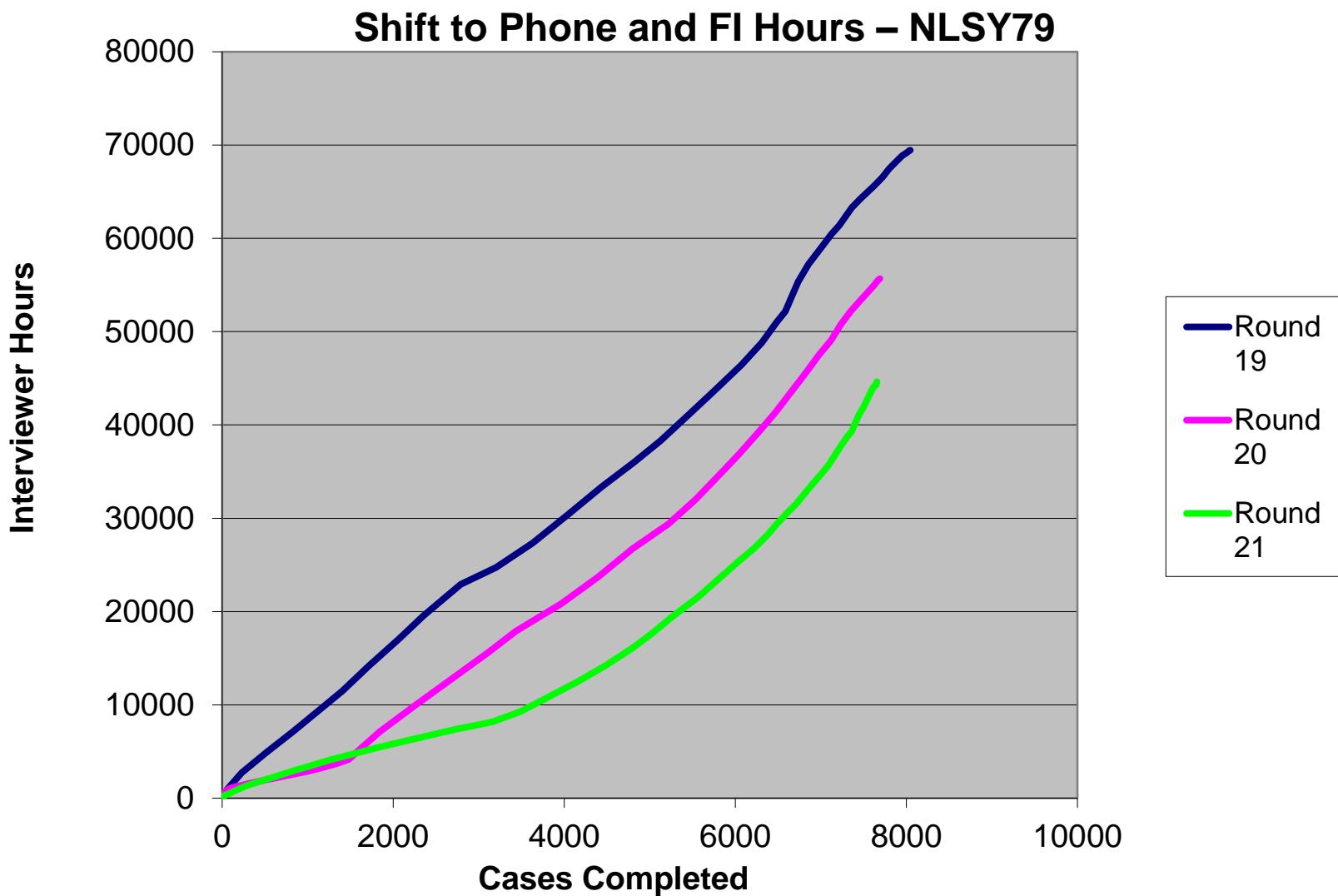
- Reducing the frequency for the NLSY79 and NLSY97, while not a cause for celebration, was acceptable as job switching had slowed down along with other major demographic events. We did not imagine the havoc the Great Recession and subsequent dismal recovery would have on employment rates.
- The NLS has employed many interview periodicities and respondents have dictated even more variation by skipping interviews but the harm has been minor. Why? Because bounded interviewing event histories recover so much data.

### NLSY79 Completion & Returning to Respondents



# Possible Methodological Priorities

- There is a lot of data on periodicity to harvest and digest. Scarce resources make large-scale methodological experiments an iffy bet given their cost.
- We may need to look very hard at the cost structure of survey efforts and whether serious changes in how they are operated can help us with the cost problem and save more surveys.
- The next figure shows how interviewer hours dropped as the phone cases went from 33% (Round 19 2000/01) to 70% (Round 20 2002/03) to 83% (Round 21 2004/05). Note the sharp change from 20 to 21 despite a smaller change in phone. This was likely due to reorganizing the field effort moving down the learning curve for the new approach.



# Thinking About the Unthinkable

## and Researching its Possibility

- The problems surveys face seem to be escalating, primarily shrinking response rates, shrinking budgets and increasing costs.
- Respondents can block us from view in a twinkling and, with all the background clutter, they will hardly notice we aren't there.
- We cannot hound respondents into submission; doing a survey is going to be more voluntary than ever as our ability to break through to them attenuates. **The alternative is shift dollars from field costs to respondent incentives.**
- We have evidence on periodicity; research on fielding approaches may have a better incremental payoff.



**Center for Human Resource Research**

The Ohio State University

Survey Design • GIS • Survey Management • Data Cleaning • Telephony • Database Management