TIME AND TIMING OF EMPLOYMENT ACTIVITY: EVENT HISTORY CALENDARS IN THE PANEL STUDY of INCOME DYNAMICS
Robert F. Belli and Frank P. Stafford
Main Points

PSID and Shift to EHC

EHC as a computerized data collection tool

Graphical User Interface and phone CAI

Extensions to other domains (lifecourse, educational history)

Methods studies
Panel Study of Income Dynamics

• Since 1968
• Unique in Using both Calendar and Diary Methods
• 2-year computerized calendar was introduced in 2003
• Motivated by move to biennial data collection in 1999 (annual until 1997)
• Methodological work with paper & pencil calendar illustrated feasibility and data quality (Belli, Shay, and Stafford, Public Opinion Quarterly, 2001)
PSID: Prior to Calendar

• To assess the number of weeks in a calendar year
  – Employed, unemployed, out-of-the labor force, missing work due to vacation, illness of oneself, illness of another
  – Separate questions for each status

• We’re interested in how you spent your time from January through December 1996.
  – Did you miss any work in 1996 because you were sick?
    • (if yes) How much work did you miss (days, weeks, months)
  – Did you miss any work in 1996 because you were unemployed and looking for work?
    • (if yes) How much work did you miss (days, weeks, months)

• At the end, interviewer would add up the weeks, and negotiate with respondent until 52 weeks was the result
Calendar and Diary

• Appear very different
• What are the commonalities?
  – Chronological time as the primary retrieval organizer (sequential retrieval)
  – Softening of standardization with flexible interviewing
  – Both amenable to GUI for interviewers and over the phone
  - Support measures of jointly occurring activities such as secondary jobs or secondary time uses
EHC METHODS

• Provides structure of timelines and domain themes that reflect the structure of autobiographical memory
• Facilitates the use of three memory retrieval mechanisms to more completely and accurately reconstruct the past
  – Top-down associations
  – Sequential associations
  – Parallel associations
• Allows the use of a more naturalistic narrative approach to remembering
• Encourages motivation to remember as the inherent cueing mechanisms lends retrieval to be more productive
### Event History Calendar

#### Landmark Events

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>JAN</td>
<td>FEB</td>
<td>MAR</td>
<td>APR</td>
<td>MAY</td>
<td>JUN</td>
<td>JUL</td>
<td>AUG</td>
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</tbody>
</table>

#### Resident's Address

#### Household Composition

#### Employment Summary

### No Employer Data Entry Window

#### Unemployed and Looking

#### Unemployed and Not Looking

### Starting Time

<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
<th>3rd of Month</th>
<th>Day</th>
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<tbody>
<tr>
<td>1997</td>
<td>MAY</td>
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### Ending Time

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### Duration

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<th>Week</th>
<th>Month</th>
<th>Year</th>
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PSID 2003 EHC instrument
<table>
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<tr>
<th></th>
<th>Whether</th>
<th>Direct Quantity</th>
<th>Derived Quantity</th>
<th>When</th>
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<tr>
<td>Move</td>
<td>EHC</td>
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<tr>
<td>Entered Residence</td>
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<td>ehc</td>
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<tr>
<td>Left Residence</td>
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<td>Jobs</td>
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<tr>
<td>Income</td>
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<td>EHC</td>
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<td>Employed</td>
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<td>=</td>
<td>EHC</td>
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<td>Unemployed</td>
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<td>Out of Labor Force</td>
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<tr>
<td>Vacation</td>
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<tr>
<td>Self-Ill</td>
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<td>EHC</td>
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<tr>
<td>Other-Ill</td>
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<tr>
<td>ADC/AFDC</td>
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<td>Q-L</td>
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<td>Food Stamps</td>
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PSID LIFECOURSE PILOT

• Respondents and interviewers randomly assigned to EHC and Q-list conditions
  – EHC N = 313 (94% response rate), mean age = 62.0 years
  – Q-list N = 318 (97% response rate), mean age = 61.6 years

• Interviewer training
  – 21 hours (over 3 days) in both conditions
  – Specific training in EHC for sequential and parallel probes
  – Specific training in Q-list for year/age conversion facility

• Outcome variables
  – Annual correspondence between experimental retrospective and prospective panel reports on moves, amount of time employed, years unemployed and cohabiting, smoking, and health status
LIFE COURSE PILOT

- Retrospective and panel agreement
  - With number of lifetime marriages excellent in both conditions (EHC kappa = .84, Q-L k = .92, z = -2.22)
    - EHC slightly underreported
      - 6.1% to 0.3% for CQ
  - With number of years in cohabitations
    - Approximately 80% of Rs in both conditions exactly matched
    - No tendency to over- or under-report in either condition
    - EHC led to significantly stronger correlation (r = .54) with panel reports in comparison to CQ (r = .15)
  - With number of years unemployed
    - Poor agreement; levels of underreporting equally high in both conditions
      - EHC: 60.2%; CQ: 58.1%
    - EHC led to a significantly stronger correlation (r = .34) with panel reports in comparison to CQ (r = .17)
• Calendar-based interviewing and data collection has a role in surveys
• Leads to higher quality retrospective reports in comparison to traditional standardized CQ interviews
  – Paper & pencil and computer-assisted
  – Face-to-face and telephone
  – Self-administered and web
  – Lifecourse and shorter reference periods
  – Confirms roles for
    • Autobiographical memory cues
    • Conversational flexibility
  – BUT, lessons to be learned (AFDC, marriage)
• Calendars can be integrated with Q-list questions in total questionnaire package
RESEARCH USING EHC FILES

• To date simple summaries along the lines of q-list posted on-line in PSID Data Center
• Need to use the fine grained timing
• Analysis of Event History Models – spells of unemployment, residence
• Use of month strings in other (vehicle purchase, receipt of transfer income)
EHC Applications

- Application to pre-study histories in Cross-sections
- Effective in domains such as partner histories (domestic partner violence study by Yoshihama et.al., 2005)
- Educational History Calendar?
- Health Conditions issues
- Redesign of time diaries (secondary and tertiary activities or conditions, location,...)