Federal Committee on Statistical Methods

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Notes from Elaine Murakami, FHWA

(any errors or misinterpretations are my own)

**Keynote Address by Don Dillman** [dillman@wsu.edu](mailto:dillman@wsu.edu)

Opening line “It is a difficult time for survey methodology…”

Losing phone as main method, and relying more on USPS Delivery Sequence File, but USPS service is decreasing and loss of business means may not be able to rely on them much longer.

Increase use of visual and self-administered surveys instead of aural methods (telephone).

Face-to-face surveys has both visual and aural components, for example the interviewer could hand a card to the R to select the one that best describes X, rather than reading through a long list. By using CATI, the visual component was lost, but an interviewer could use human social interaction skills to probe and cajole participant responses.

Internet surveys: there is no email sample frame, and some people have internet access but it may be infrequent use, e.g. once/2 weeks. Other people have many email addresses.

Referred to 2009 and 2010 papers where they did experiment with address-based sample with $5 in each of 3 postal contacts requesting a web response. Then, on the 4th contact, they allowed mailback. Found that the population characteristics of the web respondents and the mailback respondents differed by income, education. As expected, web-respondents had higher income and higher education.

**Session 1-A. Incentives**

More Money? The Impact of Larger Incentives on Response Rate in Two Phase Mail Survey

Cameron McPhee, [cmcphee@air.org](mailto:cmcphee@air.org) American Institutes for Research

National Household Education Survey, 2011 Field Test

Tested incentives at 2 points:

1. Screener-- $2 cash vs. $5 cash. $5 boosted response significantly compared to $2
2. “topical” phase
   1. Experiment 1: 0, $5, $10, $15, $20 – prepaid cash. Result: any cash is better than 0. No difference between $20 and $15.
   2. Experiment 2: 0 in the first mailing, and $5 or $15 to non-respondents
      1. If the R was an early responder to the screener, than $5 was enough in the “topical”
      2. If the $ was a late responder to the screener, than need $15 or $20 in the “topical”
   3. More $ is better for the “hardest to reach”

“Sending an incentive early is better than sending it late.” Pre-paid cash incentives are still found to “work best.”

What has it gotten use? Examining Incentives Over Time in a Cross-Sectional Study

Tracy Hunt-White tracy.hunt-white@ed.gov National Center for Education Statistics

Examining incentives over time in a cross-sectional study on post-secondary student aid (NPSAS).

Develop a predictor of response likelihood to see if can save $ by using incentives for difficult cases.

“$30 works best”

**Session VII-B: Questionnaire and Survey Design**

**National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (FHWAR) Cell Phone and**

**Debit Card Test**

Elke McLaren, Aniekan Okon, and Denise Pepe (U.S. Census Bureau)

[Elke.m.mclaren@census.gov](mailto:Elke.m.mclaren@census.gov)

The FHWAR is an address-based sample with interviews conducted by Computer-Assisted Telephone Interviewing

(CATI) and Computer-Assisted Personal Interviewing (CAPI). The purpose of the Cell Phone and Debit Card Test is to research alternative survey designs that could increase the number of CATI interviews while reducing the variance associated with conducting fewer CAPI interviews.

This test contains three panels of 500 households with no available telephone number. Each advance letter,

although unique to the panel, requests that a respondent calls the telephone center to conduct a telephone

interview. The panels are described below.

1. Advance Letter and Cell Phone – For Communication Between the Household and the Census Bureau

2. Advance Letter with a $25 Debit Card Incentive – PIN Received Upon Completion of Interview

3. Advance Letter Only – Wording Impresses that CATI interviews Save Government Dollars.

I did not attend this session, this is information pulled from the abstract. I like this concept. This avoids having to send a check to a specific name, but the activation is controlled, so that cards that are thrown away in the mail are not activated.

**Session III-A. Administrative Records and the 2020 Census**

2010 Census Simulation: Comparing Administrative Records and Decennial Data

Amy O’Hara: 2010 Census Match study: Dec 2012 report is due.

**ACS**: Chatting with Debbie Griffen from the Census Bureau

The Census Bureau has contracted with CNSTAT for part of the ACS program review. One task is to conduct a 1-day workshop for non-federal ACS users as part of the ACS program review. It is tentatively scheduled for “spring 2012”, but might be later. Dan Cork at CNSTAT is the staff assigned. In addition, there will be a formal panel established to review methods and products. Connie Citro is working on panel membership. One of the goals is to build an ACS data community and to have an annual meeting for people to share their ACS experience.

**NCRN:** Chatting with Dan Weinberg, CB

The Census Bureau has started a new “research program” in conjuction with National Science Foundation. <http://www.census.gov/NCRN>

They have selected 8 universities, with a 5-year research program, with 6 “medium nodes” and 2 “small” nodes. One of the small nodes is the University of Colorado at Boulder. "Improving the Connection between the Spatial and the Survey Sciences", and will include investigation of ACS sample weights. *Principal Investigator:* Seth E. Spielman (Assistant Professor of Geography); *Senior Personnel:* Nicholas N. Nagle (Assistant Professor of Geography, University of Tennessee–Knoxville).

IS THIS A POTENTIAL WAY TO GET SOME RESEARCH ISSUES ON ACS RELEVANT TO TRANSPORTATION COMPLETED?

What about the concept of TADs as a geographic unit for ACS 3-year tabulation?

What about the concept of TAD for a partially synthetic PUMS?

**Session IV-C: Reducing Measurement Error**

Exploring Underreporting and Respondent Records Usage in the Consumer Expenditure Survey (CEQ).

Neil Tseng, [tseng.neil@bls.gov](mailto:tseng.neil@bls.gov) Bureau of Labor Statistics

RTI conducted study for BLS including perceptions of burden and how it affects accuracy of reporting. Respondents felt “very confident” about the accuracy of their responses, but when objectively compare receipts to reported amounts only 53% were considered to match. Record of actual cost (e.g. receipt) were available for only 36% of items. Values were considered to match, if value was +/- 5% if item $200 or more, and if +/- 10% for items less than $200. Errors in both directions. Magnitude of underestimates was 48%; magnitude of overestimates was 57%.

**Session VIII-C Disclosure Avoidance**

Generalized Doman Size Threshold for Analysis Restrictions for Remote Analysis Servers

Avinash C. Singh [singh-avi@norc.org](mailto:singh-avi@norc.org) 312-325-2574

Microdata housed behind firewalls. How to provide access but protect individual records.

The most important thing I learned from this presentation is that the MAS (Microdata Access System) that Laura Zayatz is working on at CB is only one of several attempts to improve access to microdata while protecting individual confidentiality. Other systems in development include:

ANDREW by National Center for Health Statistics  
 DAS by National Center for Education Statistics

This paper discussed the concept of using a generalized domain (g-domain) sample size with a list of screened analytic variables to determine whether to allow specific data queries or not.

Disclosure Avoidance through Noise Infusion and Synthetic Data: The Case of the Quarterly Workforce Indicators.

John Abowd and Lars Vilhuber, and many other authors.

The Quarterly Workforce Indicators (QWI) is a report on employment, accessions, layoffs, hires, etc, tabulated by worker characteristics such as age, gender and race and ethnicity. The lowest geographic unit is county. QWI disclosure avoidance mechanism relies heavily on use of noise infusion, there is minimal suppression and no complementary suppression. The actual distribution is used, and then the median value is removed, and the extremes are limited. From the remaining distribution a value is selected, which becomes the synthetic value of the unit record. Referred to 2008 paper at Statistical Data Protection conference.

**Session VII-C Innovative Approaches**

Temporal and Spatial Activity based on Mobile Phone Network Data

Marihn van Pelt, Statistics Netherlands

They examined texting and SMS and found that peaks occurred at noon, 5:30 p.m. and 10:00 p.m. They found their “analysis of phone mobility gives an underestimation of the official travelling distance.” Future research will look at use of this method for understanding tourism and locations visited by tourists and their length of stay.