

Inside this Newsletter

| | |
|---|----|
| Message from Section Chair..... | 1 |
| Report from Education Officer..... | 2 |
| Report from Council of Sections Representatives..... | 4 |
| JSM 2010: Report from Program Chair..... | 6 |
| Feature Article: Two Decades of Survey Methods Research Pay Off for the Census..... | 6 |
| Announcements..... | 8 |
| SRMS Mission Statement..... | 12 |

Message From the Section Chair

Howard Hogan



How well is the section fulfilling its mission “to promote the improvement of survey practice and the understanding of survey methods”? Most of the news of the section is reported elsewhere in this newsletter, but let me highlight a few recent accomplishments.

A major accomplishment has been our webinars that Mike Larsen has organized and reported on. These webinars accomplish three important goals for our section. First and most importantly, they directly promote the improvement of survey practice and understanding by bringing important topics to a wide audience. Secondly, they promote collegiality with the American Association for Public Opinion Research (AAPOR), with whom we co-sponsor

the events. To quote Ivan Fellegi, “Collegiality is the very heart of a statistical organization,” or in our case, statistical section. Finally, they have helped to put the section back on firm financial footing. For years the section has relied for its funds on the revenue from our JSM proceedings. That source ended with the move to CD ROM proceedings. So far, the webinars have been both a statistical and a financial success!

We are also fulfilling our mission by co sponsoring the Hard to Reach Populations Conference, now planned for autumn 2012, probably in New Orleans or San Antonio. The other sponsors include the Government Statistics section, the Social Statistics Section, AAPOR and the World Association for Public Opinion Research.

We continue to be a major sponsor of the International Conference on Establishment Surveys (ICES), now at ICES IV. The conference is now planned for 2012 in Montréal. Furthermore, up until now, ICES has been an *ad hoc* arrangement. Every few years a few interested statisticians would organize a committee and start up the next ICES. Since this is indeed an international conference, thought was given to hosting it by an international body, such as the ISI. However, the ASA was much more responsive. We have now taken the lead to make ICES a permanent part of the ASA, with permanent governance. We have an agreement with ICES that there will be a representative from SRMS who will be responsible for setting up ICES V. So now everything is on a firm foundation.

We have had conversations with ASA on Professional Statistician (PStat) status, which I mentioned in our previous newsletter. Pstat is offered by the ASA as a service to those of its members who find added value in voluntarily obtaining credentials that provide recognition by peers and employers. This seems particularly important to some statisticians who work in organizations where their peers are accredited by other professional bodies. After discussions, the SRMS board concluded that this might occasionally be of benefit to a few of our members, but was unlikely to play a major role one way or another.

I am still looking for ways to involve more of our members, especially more junior members in the Section. If you have ideas let me know. Indeed, if you have ideas on any subject, send them on. We have a mail box set up for this purpose:

Asa.srms@gmail.com –

Emails sent to this address will go to the chair, treasurer, and secretary. It is not a list-serve.

Report from the Education Officer

Mike Larsen



The Survey Research Methods Section of the American Statistical Association will co-sponsor two continuing education courses at JSM 2010 in Vancouver. F. Jay Breidt and Jean D. Opsomer, both of Colorado State University, will present a one-day course entitled “Modeling and Data Analysis for Complex Surveys.” Survey data often arise from the efforts of institutions (like government agencies) to describe characteristics of a heterogeneous population in a cost-effective way. Typically, institutions use complex surveys with stratification, clustering, and unequal probabilities, and use various weighting

adjustments to account for nonresponse and calibrate to external data sources. Researchers working with complex survey data may be tempted to ignore these sampling aspects when conducting statistical analyses, but traditional methods often are not appropriate unless the complexities of the survey design are explicitly taken into account. This short course is aimed at researchers with a basic background in statistical theory and methods who need to analyze complex survey data. No previous background in survey sampling is assumed. The presenters will begin by reviewing the features that make survey data complex, including design properties and post-sampling adjustments, and a discussion of the potential pitfalls of ignoring these aspects during analysis. They then will describe and compare several model-based and design-based approaches to estimation and inference with complex survey data, highlighting their respective advantages and disadvantages. The various approaches will be demonstrated with example data sets, including step-by-step illustrations on how to apply them using statistical software.

Roderick Little and Trivellore Raghunathan, both of the University of Michigan, will present a one-day course entitled “Bayesian Inference for Surveys.” Bayesian methods in statistics are increasingly popular, spurred by advances in computational power and tools. Bayesian inference provides solutions to problems that cannot be solved exactly by standard frequentist methods. Students learning the Bayesian approach will obtain new analysis tools and a deeper understanding of competing systems of statistical inference, including the frequentist approach. The objective of this course is to describe the application of the Bayesian approach to survey sampling, where the focus of inference is on finite population quantities. Both instructors have conducted research in Bayesian methods, and have developed applications to real-world problems. Attendees are assumed to have some experience of familiarity with survey sampling (applied or theoretical) and some basic background in statistics, such as an undergraduate course in statistical inference or methods.

Looking ahead to the 2011 meeting in Miami Beach, please send suggestions for continuing education courses to the SRMS education officer, Mike Larsen, at mlarsen@bsc.gwu.edu.

The 2nd and 3rd webinars in the new ASA SRMS/AAPOR Webinar series were presented in the spring semester. On February 9, Roger Tourangeau, a Research Professor at the University of Michigan’s Survey Research Center and the Director of the Joint Program in Survey Methodology (JSPM) at the University of Maryland, presented a webinar on “The Psychology of Survey Response.” There were more than 150 registrations for this webinar. This two-hour course examined survey questions from a psychological perspective. It covered the basics on how respondents answer survey questions and how problems in this response process can produce reporting errors. The class focused on behavioral questions and served as an introduction for researchers who develop survey questionnaires or who use the data from surveys and want to understand some of the potential problems with survey data. It described the major psychological components of the response process, including comprehension of the questions, retrieval of information from memory, combining and supplementing information from memory through judgment and inference, and the reporting of an answer.

On April 6th, Nirmala Kannankutty of the National Science Foundation's Science Resources Statistics Division presented a webinar entitled "Human Resources in Science and Technology: Surveys, Data, and Indicators from the National Science Foundation." The Division of Science Resources Statistics (SRS) is a federal statistical agency housed at the National Science Foundation (NSF). SRS's role within NSF is to "provide a central clearinghouse for the collection, interpretation, and analysis of data on scientific and engineering resources, and to provide a source of information for policy formulation by other agencies of the Federal Government..." Within this mandate SRS is involved in collecting and disseminating information on R&D expenditures and activities and on human capital issues. The United States is unique among major industrialized nations in that it has directly invested in collecting detailed data from a variety of sources on the entire science and engineering pipeline. Each of the data sources came about from U.S. federal administrative needs. The sources have evolved into important elements for the study of higher education and the scientific workforce. In this webinar, these surveys and data sources were described. Key indicators regarding trends in U.S. science and engineering degree production, enrollments, and workforce were defined and described. The *Science and Engineering Indicators: 2010* and *Women, Minorities and Persons with Disabilities in Science and Engineering* reports was used as examples for these indicators. There were 15 registrations for this webinar.

The ASA SRMS/AAPOR webinar series will resume in the fall of 2010. If you have suggestions for topics and/or speakers, please send them to the SRMS education officer, Mike Larsen, at mlarsen@bsc.gwu.edu. Watch webinar announcements at <http://www.amstat.org/sections/srms/webinar.cfm>. Archived information is available at http://www.amstat.org/sections/srms/webinar_archive.cfm.

Report from the Council of Sections Representatives

Rachel Harter and Tony An



Following up on an item of business from last summer's SRMS annual meeting that generated a lot of discussion, the ASA board changed the Council of Sections (COS) charter last fall regarding approval of new sections. The relevant section with the change is as follows:

The approval process for the creation of a new Section will consist of the following steps:

- a. The required petition, proposed charter, and list of Section officers will be submitted to the Council of Sections Governing Board 90 days before either the winter meeting in

February or the annual meeting in August. Sections will be notified of a proposed new section at least 60 days prior to the JSM Council of Sections meeting.

b. Upon certification of the petition and approval of the charter by the Council of Sections Governing Board, a motion for chartering the new Section will be presented by the Chair of the Council of Sections at the next annual meeting of the Council of Sections in August.

c. A mail or e-mail ballot of the Council of Sections will be taken on the issue by October 1 of the same year.

d. If approved by a majority vote of the Council of Sections, the new Section will be officially chartered as of January 1st of the year following the Council of Sections vote.

Speaking of charters, the charters of all ASA sections are subject to periodic review. The Council of Sections Governing Board (COSGB) representatives are each assigned a set of sections for communication throughout their terms, and they are responsible for reviewing the charters of these sections in the third year of their terms. Donna Stroup, the COSGB representative who interfaces with us (your COS section representatives), reviewed the SRMS charter and suggested some updates to the version that currently is posted on our section website (<http://www.amstat.org/sections/SRMS/charter.html>). The SRMS Executive Committee reviewed and approved updates to the SRMS charter. The recommendations and revisions require a vote by the section members, which will coincide with the election of officers next year. As a preview, here is a summary of the changes that were recommended:

- Clarified the objective and functions of the section
- Clarified “Section” and “Association” language in the document
- Modified language to permit electronic communications for official business
- Clarified that section officers must be section members
- Clarified the terms of office for section officers
- Modified the quota needed to petition for future charter changes to a percentage of membership rather than a fixed number; charter changes can still be recommended by the executive committee
- Similarly modified the quota needed for the membership rather than the nominating committee to nominate officer candidates
- Rearranged and renumbered paragraphs to be more consistent with model charters

JSM 2010: Report from the Program Chair

Mike Elliot



The Survey Research Methods Section (SRMS) is pleased to announce its program for the 2010 Joint Statistical Meetings. We will have 48 speaker sessions as primary sponsor, including 7 invited sessions, 18 topic contributed sessions, and 23 contributed sessions. Invited session topics include several sessions related to missing data issues and small area estimation, as well as use of paradata and planning for the 2020 Census. Highlights from the topic contributed and contributed sessions include a variety of sessions devoted to federal survey issues (such as record linkage at the Census Bureau, estimating farms at the Department of Agriculture, and counting workplace injuries at the Bureau of Labor Statistics), several sessions on design (including two-phase data collection and address-based sampling), sessions on analyzing data from multi-mode surveys, small-area estimation sessions, sessions on novel weighting methodologies, and two sessions in honor of Rod Little's 60th birthday focusing on missing data and survey methodology. We also have 6 speaker luncheons and roundtables on a variety of analytical and methodological issues. For more details on luncheons and roundtables, please see the July issue of Amstat News.

We encourage attendance at the SRMS poster session on August 2nd, 10:30-12:20. For the third year in a row we will be offering prizes for the best posters, so we anticipate another year of excellent presentations. We also have several students presenting in the student paper competition, jointly sponsored with the Social Statistics Section and the Government Statistics Section on August 5th, 8:30-10:20. We also remind SRMS members of the SRMS committee meeting on August 4th from 6-8 pm.

Two Decades of Survey Methods Research Pay Off for the Census

David Whitford, U.S. Census Bureau

The Census Bureau has had a long history of survey methods research dating back to at least the early 1950s, with the pioneering work of Eli S. Marks, Naomi (Donny) Rothwell, Robert Hanson, and others. However, around the time of the 1990 Census, a new group came to the Census Bureau to reenergize the program. These folks included Bob Groves, now Director Groves, as well as Don Dillman and Betsy Martin. They instituted a systematic program of research into improving the Decennial Census. Some of this research made its way into the

Census ten years ago, including the use of an advance letter and reminder cards. But it was in the current census, twenty years later, that the research program has paid off.

The biggest change for 2010, of course, was the end of the “Long Form,” used in every Census since 1960, a change made possible by the American Community Survey (ACS). The “short-form-only” census made the process, if not exactly nimble, at least more flexible than earlier efforts. Interviewer training was far easier, for example. Software systems were easier to revise and repair.

A good example of a new approach was the use of a replacement form. The challenge to implementing a census replacement form is the huge scale of the operation. Quickly addressing and mailing forms for tens of millions of non-respondents is beyond the capability of the printing industry. So the Census Bureau focused the replacement form treatment. Areas with expected high initial response got no replacement forms. Areas expected to have very low initial response received a replacement form for *all units*: replacement forms for these housing units could be printed in advance. For the other areas, where the Census Bureau expected response rates “in the middle,” forms were mailed only to non-respondents. This selective targeting of households was made possible by having the Post Office read the postal tracking bar-code and report back even before the questionnaire reached the processing office.

Another change was the use of a bilingual (English/Spanish) questionnaire for 12 million housing units in targeted areas. This targeting was facilitated by up-to-date information from the ACS. Also, to accommodate language diversity, the advance letter contained directions to the 2010 census web site in six languages. A targeted direct mail postcard with Telephone Questionnaire Assistance phone numbers in six languages was added and sent to approximately 9.7 million housing units.

The collection of a global positioning system (GPS) coordinate was done for all structures during address listing. The collection of GPS coordinates allowed the Census Bureau to realign TIGER (Topologically Integrated Geographic Encoding and Referencing) maps to GPS coordinates to ensure structures are tabulated in the right local geographies. The GPS coordinates also allowed the Census Bureau to compare its address lists with “911” files and property-tax (“cadastral”) files provided by its state partners, providing an additional check on housing unit coverage

In another innovation, people enumerated in the Census were matched to the Census Bureau’s Statistical Administrative Records System (StARS) to determine if there are potentially any additional persons in the housing unit who may not have been counted. If so, the housing unit could be targeted for Coverage Follow Up.

The Census Bureau will evaluate each of the parts of Census 2010, but that is a lengthy process. However, one success is evident. Seventy-two (72) percent of households participated in the 2010 Census by mail — the same rate achieved in Census 2000. The Mail Participation Rate is the percentage of forms mailed back by households that received them. The rate excludes households whose forms were returned to us by the U.S. Postal Service as “undeliverable,” strongly suggesting the house was vacant.

To quote Bob Groves:

As a long-time survey researcher, I have studied the influences on survey participation and tried to understand why some people respond and others do not. Despite all this research, response rates in surveys have declined each year throughout the western world. I fully expected the Census to achieve lower participation rates this decade than it did in 2000. If you ask your friendly neighborhood survey researcher if they could achieve the same response rates in their surveys as they did ten years ago, I strongly suspect they would burst out laughing.

How was this success achieved? It will take a while to diagnose all the ingredients of the success, but our findings show that the local partners who got out the message to their neighbors, the paid media, and the public relations campaign greatly increased awareness of the Census from December 2009 to April 1, 2010. The data are also pretty clear that the replacement form was effective. The census tracts that received the replacement form clearly exceeded their performance in 2000. Although we don't have data yet to prove this, I also suspect the short-form-only design was a winner.

The Census is not over, although non-response follow up should be ending soon. This will be followed by other major field operations including the coverage checks and the evaluation survey. Then follows the parts well known to survey folks but unseen by the public: coding, editing, tabulating, reviewing and publishing. But it is perhaps not too early to declare the Census a success.... a success for survey research.

Announcements

SRMS Student Travel Award Winners

We would like to congratulate the two student travel award winners for 2010, who were selected to receive the full Student Travel Award of \$750. The winners for this year are:



Rebecca Steorts
University of Florida



Anne-Sophie Charest
Carnegie Mellon University

We also would like to congratulate two Honorable Mention Award Winners, who will receive \$500:



Shin-Jung (Julia) Lee
University of Michigan



Daniel Yang
Oregon State University

2011 Waksberg Award



The recipient of the 2011 Waksberg award is **Danny Pfeffermann**. Danny is Professor at the Hebrew University of Jerusalem and the Southampton Statistical Sciences Research Institute, U.K. His research interests include small area estimation, time series, and analysis of complex survey data. He recently edited (with C.R. Rao) the two-volume *Handbook in Statistics (Sample Surveys)* published by North-Holland. His work spans the spectrum of theoretical to applied, and his interactions with fellow statisticians are worldwide.

The journal, *Survey Methodology*, established the award in honor of Joe Waksberg, who made many important contributions to survey methodology. Danny will receive a cash award made possible through a grant from Westat, Inc., in recognition of Joe Waksberg's contributions during his many years at Westat.

As the 2011 Waksberg Award honoree, Danny will author a paper that reviews the development and current state of a significant topic in the field of survey methodology. The paper will be presented at the 2011 Statistics Canada Symposium held in the fall of 2011 and published in the December 2011 issue of *Survey Methodology*. The tentative title of Danny's paper and talk is "How We Should Approach the Modeling of Complex Survey Data."

Previous winners of the Waksberg Award are Gad Nathan (2001), Wayne Fuller (2002), Tim Holt (2003), Norman Bradburn (2004), J.N.K. Rao (2005), Alastair Scott (2006), Carl-Erik Särndal (2007), Mary Thompson (2008), Graham Kalton (2009), and Ivan Fellegi (2010).

The Waksberg Award recipient is selected by a four person committee appointed by *Survey Methodology* and the American Statistical Association. The 2011 Waksberg Award selection committee includes Betsy Martin, Mary Thompson, Wayne Fuller, and Dan Kasprzyk.

Nominations for the 2012 Waksberg Award should be sent to Betsy Martin at betsy@folhc.org.

Fourth International Conference on Establishment Surveys (ICES IV) Planned for 2012

Planning is underway for the Fourth International Conference on Establishment Surveys (ICES IV). If you've attended any of the past conferences, you know how invaluable they have been to the literature and practice of establishment surveys. If you are newer to the establishment survey field, you will find the conference especially rewarding. A major strength of the conferences is the strong international presence, both in the program development and attendance. Over 400 people from 94 countries attended ICES III. On June 11-14, 2012, survey practitioners from government agencies, academia, private sector and more will gather at the Sheraton Centre Montreal in Quebec, Canada for ICES IV and continue the tradition of sharing innovative techniques and best practices to address common issues. Examples of potential topics include the following:

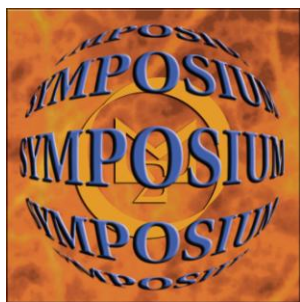
- Updating business registers
- Sample design challenges
- Questionnaire design for establishment surveys
- Collecting data electronically from establishment surveys
- Issues of multi-mode data collection
- Factors that affect establishment survey participation
- Generalized survey processing systems for establishment surveys
- Measuring non-response bias
- Variance estimation
- Advances in disclosure protection
- Efficient use of administrative data in establishment surveys
- New directions in establishment surveys

The conference will include short courses, a keynote speaker, poster sessions, software demonstrations, and invited and contributed paper sessions.

Sponsorship of the meetings is being provided by the American Statistical Association, ASA Section on Survey Research Methods, ASA Section on Government Statistics, International Association of Survey Statisticians, and the Statistical Society of Canada. Administrative support for ICES IV will be provided by the American Statistical Association, similar to previous ICES meetings. Also, many other organizations and government agencies are or will be providing support for the conference.

With the support of these many great organizations and the diverse gathering of individuals involved in establishment surveys, we anticipate that ICES IV will prove to be another fruitful conference in the valuable ICES series. So, save the date, June 11-14, 2012, and join practitioners from around the globe in Montreal, Canada! Online solicitation for invited papers opens December 1, 2010, and will continue until March 1, 2011. Online solicitation for contributed papers will open June 1, 2011, and will continue until August 31, 2011. Expect updates on participation and program details to ICES IV through this newsletter and the upcoming ICES IV website. Inquiries may be directed to ices4@amstat.org.

2010 International Methodology Symposium



Statistics Canada

October 26-29, 2010

Ottawa, ON, Canada

Social Statistics: The Interplay among Censuses, Surveys and Administrative Data

Statistics Canada's 2010 International Methodology Symposium will take place at the Crowne Plaza Hotel, located in the heart of downtown Ottawa, from October 26-29, 2010.

The Symposium will be titled "**Social Statistics: The Interplay among Censuses, Surveys and Administrative Data**". Members of the statistical community, such as those from private organizations, governments, or universities, are invited to attend, particularly if they have a special interest in statistical or methodological issues resulting from the use of multiple sources of data (censuses, sample surveys or administrative data).

The first day will consist of workshops, while the following days will consist of both plenary and parallel sessions covering a variety of topics. Additional research and results may be presented via poster sessions.

The presentations will be related to the methodological aspects of using multiple sources of data. Topics may include:

- Sampling Frames and Sample Design
- Coordinating Samples
- Content and Questionnaire Design
- Data Collection Methods and Acquisition of Administrative Data
- Supplementing Survey Data with Administrative Data
- Administrative Data for Direct Estimation
- Statistical Databases from Administrative Data (e.g., Population Registers)
- Imputation
- Weighting and Estimation
- Dissemination and Data Access
- Record Linkage Techniques
- Record Linkage Software
- Measurement Errors
- Response Burden
- Treatment of Nonresponse
- Confidentiality, Privacy and Ethical Issues
- Small Area Estimation

Visit our Internet site regularly to obtain further details about the program, workshops, registration, accommodation, tourism information and more at

<http://www.statcan.gc.ca/conferences/symposium2010/index-eng.htm>

SRMS Mission Statement

SRMS has 1500 members, of which over 100 are based outside of North America and is one of the largest ASA Sections. The SRMS mission is to promote the improvement of survey practice and the understanding of survey methods by encouraging both theoretical and applied research on survey-related topics and by disseminating information on survey methods.



Areas of interest for the Section include all that employ survey methodology as a focus or as a prime tool of investigation. Of special

interest are:

- ❖ Theoretical foundations of sampling;
- ❖ Sample design and estimation;
- ❖ Nonsampling errors and data collection methods;
- ❖ Analysis and presentation of survey data;
- ❖ Education of the public and students on the importance of scientific survey research;
- ❖ Publication and dissemination of survey research findings; and
- ❖ Ethics related to survey conduct and standards for survey practice.

Not a member yet? Here is how you can join:

- If you are not an ASA member, go to the membership page of the ASA and fill the application at www.amstat.org/membership/index.cfm?fuseaction=becomeamember. Then sign up for the SRMS section as part of your membership.
- If you are already an ASA member, just call customer service at 1-888-231-3473 to add SRMS membership.

The SRMS has produced material and resources that are available on our website including:

- ❖ The “What is a Survey?” series for non-specialists, free of charge
- ❖ The SRMSNET Mailing List
- ❖ List of other related associations
- ❖ Survey Analysis Software (under Links and Resources)
- ❖ Universities and Laboratories
- ❖ ...and much more.

For more information, including links to specific officers, check out the SRMS website at: www.amstat.org/sections/SRMS/index.html

There is also a link from the ASA website at www.amstat.org