



WSS NEWS

WASHINGTON
STATISTICAL
SOCIETY

December 1991

WSS Member Honored by ASA

Joan Rosenblatt was one of five members of the American Statistical Association to receive the ASA Founders' Award at the 1991 Joint Statistical Meetings in Atlanta. Dr. Rosenblatt, Deputy Director of Computing and Applied Mathematics, at the National Institute of Standards and Technology, received her award for distinguished leadership of a program of applied statistics with a focus on engineering; for furthering the public image of statistics by serving as liaison with other mathematical, statistical and scientific groups; for representing the ASA on National committees; and for outstanding service to the Association over many years. Congratulations to a most deserving member!

Holiday Party to Honor Janet Norwood

This year's annual Holiday Party, scheduled for Thursday, December 12, 1991, is being given in honor of **Janet Norwood**, Commissioner of the Bureau of Labor Statistics, who is retiring at the end of this year. Dr. Norwood, who is leaving after 28 years of Government service, is a Fellow and Past President of the American Statistical Association, as well as long-time active member of WSS. The party will be held in the Rayburn House Office Building, overlooking the Capitol, and is being catered by Well Dunn! Come join us in showing our appreciation for the dedication and excellence Janet Norwood has shown throughout the years to the profession and the local statistical community. For more information about reservations, see the flyer in this newsletter.

WSS Seminars (All events are open to any interested persons.)	
December	
5 Thur.	Variance Estimation Seminar: Bootstrapping Post-Stratification and Regression Estimates from a Highly Skewed Distribution (4th in series)
10 Tues.	Issues Arising in the Application of Bonferroni Procedures in Sample Surveys
11 Wed.	Redesign of the Current Population Survey Questionnaire
12 Thur.	Holiday Party in Honor of Janet Norwood
16 Mon.	The Effect of Government Programs on Financial Performance: A Non-parametric Approach
January	
16 Thurs.	Quality Initiatives in the Annual Refiling Survey

Announcements

Curtis Jacobs Memorial Prize for Outstanding Statistics Project

The Curtis Jacobs Memorial Prize is being sponsored by the Washington Statistical Society and the American Statistical Association to honor the memory of a former statistician at the Bureau of Labor Statistics. Mr. Jacobs was the chief statistician on a number of major, Federal economic statistics programs, including the Consumer Price Index, the Producer Price Index, and the Export and Import Price Programs.

The award is designed to encourage students of middle schools and high schools in the Washington-Baltimore area to gain an understanding and appreciation of surveys and their uses. Teams of one to four students are invited to submit projects that include collecting and analyzing survey data and writing a project report. In this, the first year of the award program, WSS is targeting students who are taught by mathematics teachers who have participated in one of the Quantitative Literacy workshops sponsored by the ASA. For more information on the program, contact Richard Valliant at (202) 523-1871.

Science Fairs 1992: REMINDER

Volunteers are still needed for judging 1992 science fairs in Maryland, D.C., and Northern Virginia. If you would like to be a WSS science fair judge, or if you would like additional information about this activity, please contact Susan Ellenberg at (301) 496-0694; or send a note with your name, address and daytime phone number to Susan Ellenberg, Division of AIDS, 6003 Executive Blvd., Bethesda, MD 20892, or FAX: (301) 480-5703.

Partnerships in Education

Many public and private workplaces have established partnerships with a local school in an effort to help improve the educational experience of children in our area. The Quantitative Literacy Committee of the WSS seeks information about these partnerships so

we may offer the assistance of a statistician to each partnership. Please inquire about the existence of a partnership at your worksite and send information about the school, activities, and contact name and address/phone to Ron Fecso, QL Committee Chair, at FAX: (202) 334-3751, E-mail RFECISO@NAS.BITNET or phone (202) 334-2295. Your help will be greatly appreciated. If no partnership exists at your site, consider starting a small effort. The WSS-QL Committee will help you.

QL Updates

Gary Shapiro, PG County Coordinator, is reviewing textbooks and other material for two new high school statistics courses which are in the plans for Prince George's County schools. Gary would like to hear from you if you'd like to get involved. His phone number is (301) 763- 2644.

Shail Butani, Fairfax Coordinator, reports that she was elated with the results of a meeting she had with Fairfax County math supervisors in October. Fairfax has bought-into our volunteer assistance offers and plans a wide range of activities which should lead to substantial impact on the quantitative education of the youth of Fairfax County. Fairfax is our most widespread effort now and can serve as a model for our other jurisdictions. A more detailed discussion is planned for next month's newsletter.

Fairfax QL volunteers Maureen Clifford (EPA) and Terry O'Connor (NASS) addressed a series of five math classes at Rocky Run Intermediate School on October 15th. They spoke about their careers and presented the video tape "What is Statistics?" In-depth discussions on the many uses of statistics followed, with active student participation in a group statistical exercise. For information about Fairfax activities, call Shail Butani at (202) 523-1850.

District of Columbia coordinators Janet Williams and Jean-Claude Bonhomme attended a career day at Shaw Junior High on November

Announcements--Cont'd

22. For information or suggested activities in the District, please call Janet on (202) 272-2281 or Jean-Claude on (202) 720-2616.

Bitten by TQO?

Are you interested in benchmarking your work processes with those of another organization? Would you like to participate in an on-going WSS quality forum? Would you care to share your experiences with improvement teams, quality measurement or other Total Quality Organization techniques? Let's learn from each other. If you are interested, please call Dan Trevors, Statistics of Income Division, Internal Revenue Service, on (202) 874-0467 or FAX on (202) 874-0922.

Census Bureau's 1992 Annual Research Conference

The Census Bureau's 1992 Annual Research Conference (ARC 1992) will be held March 22-25, 1992, at the Holiday Inn Crowne Plaza in Arlington Virginia (only 1/2 mile from National Airport and three blocks from Metro). ARC 1992 will feature such topics as accuracy of undercount estimates, post enumeration survey estimation issues, quality management in statistical agencies, modeling social changes and ethnographic coverage evaluation, subnational population and housing estimation, enhancing the usefulness of wage and income data, electronic data collection, technical and management decisions in CAI, issues in CATI implementation, interviewer perspectives on CAPI, strategies for developing CAI systems, nonresponse and estimation issues in establishment surveys, bias corrections for survey data, combining administrative and survey data and preparing data for analysis and presentation. For further information contact Ms. Maxine Anderson-Brown, ARC Conference Coordinator, Office of the Director, Bureau of the Census, Washington, DC 20233, (301) 763-1150.

Washington Academy of Sciences Session

The Washington Academy of Sciences and its co-sponsors announce the following up-

coming event for their 1991-92 Science and Engineering Program:

Our Sun, Our Earth, Their Constant Interaction: the International Solar-Terrestrial Program of the Inter-Agency Consultative Group for Space Science.

The session will be held Wednesday, December 4, 1991, from 6:00-9:00 pm at the National Academy of Sciences, 2101 Constitution Ave., NW, Washington, DC. For additional information, call the Washington Academy of Sciences office at (703) 527-4800.

Tentative Schedule of SIGSTAT Meetings

SIGSTAT is the Joint Special Interest Group in Statistics for the Capital PC User Group and WORMSC (Washington Operations Research/Management Science Council). The tentative schedule of events for the next few months is as follows:

Dec.11: **Statistix 3.5**--Menu-driven, general stat program, PC Magazine's Editor's Choice. Half price coupons available at meeting (\$147.50).

Jan. 1: **S-Plus 2.0 Graphics**--Interactive dynamic graphics, including 3D data spinning, scatterplot matrix brushing and point identification using a mouse.

Feb. 12: **StatXact 2.0**--Exact p-values and confidence intervals for one and two sample procedures, RxC contingency tables, stratified 2x2 tables and stratified 2xC tables.

All meetings are scheduled for Wednesdays from 12:30-1:30 pm in Room B-14, 1301 New York Ave., NW, Washington, DC. (The building is located midway between the Metro Center and McPherson Square Metro stops.) If this is your first SIGSTAT meeting, call Charlie Hallahan, (202) 219-0507, to gain entry into the building.

(cont'd on page 8)

Program Abstracts

TOPIC: Variance Estimation Seminar: Bootstrapping Post-Stratification and Regression Estimates from a Highly Skewed Distribution (4th in series)

SPEAKER: William Wong, Internal Revenue Service

CHAIR: Sue Ahmed, National Center for Education Statistics

DISCUSSANT: Fritz Scheuren, Internal Revenue Service

DATE/TIME: Thursday, December 5, 1991, 12:30-2:00 pm

LOCATION: Forrestal Bldg., Room BE-069 (Basement Level), 1000 Independence Ave., SW, Wash., DC (Blue or Orange Line--Smithsonian or L'Enfant Plaza). Government employees need ID to enter; nongovernment employees call John Herbert at (202) 586-4360 for escort.

SPONSOR: Methodology Section

ABSTRACT: Random samples from highly skewed distributions are apt to yield volatile results. The usual symmetric two sigma confidence intervals would not apply, since the distribution of sample results is likely to be skewed. This paper illustrates the volatility of sample estimates from one such distribution. To reduce the volatility, where possible, a regression model for the population was calculated from the sample. Where the regression model does not apply, post-stratification was employed. Bootstrap sample estimates of both totals and ratios were, then, used to analyze the distribution, quantify the results and compute confidence intervals.

* * * * *

TOPIC: Issues Arising in the Application of Bonferroni Procedures in Sample Surveys

SPEAKER: Sue Ahmed, National Center for Education Statistics

CHAIR: Barry Graubard, National Cancer Institute

DISCUSSANT: Myron Katzoff, National Center for Health Statistics

DATE/TIME: Tuesday, December 10, 1991, 12:30-2:00 pm

LOCATION: GAO Bldg., Room 2437, 441 G Street, NW, Wash., DC (Red Line-- Judiciary Square). Call Shandon Brown at (202) 272-2282 to put your name on the guard's list for entry by COB Friday, December 6, 1991.

SPONSOR: Methodology Section

ABSTRACT: Multiple comparison procedures are used to control the level of a type I error when making simultaneous inferences. These procedures are most commonly used following the rejection of an overall F test in an analysis of variance. In large scale sample surveys, reports are often produced which present a large number of point estimates and standards errors. In such reports, it is often desirable to draw some conclusions based on comparisons of means or proportions across groups. In addition, analytic reports are produced which try to tell a story about some aspect of the survey.

Program Abstracts--Cont'd

Issues Arising in the Application of Bonferroni Procedures in Sample Surveys (cont'd)

It may be desirable to provide some adjustment for the multiple comparisons that are being made in such reports. The Bonferroni adjustment is particularly easy to use in this situation, since it is a general procedure which does not require a preceding ANOVA. This paper discusses some of the issues arising in attempting to apply multiple comparison procedures in this setting, drawing upon the experience of the National Center for Education Statistics. A particularly difficult issue is the decision as to the number of comparisons to be adjusted for, i.e., the size of a "family."

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- TOPIC:** Redesign of the Current Population Survey Questionnaire
- SPEAKERS:** James Esposito, Bureau of Labor Statistics
Anne Polivka, Bureau of Labor Statistics
- CHAIR:** Jennifer Rothgeb, Bureau of the Census
- DATE/TIME:** Wednesday, December 11, 1991, 12:30-2:00 pm
- LOCATION:** GAO Bldg., Room 2734, 441 G Street, NW, Washington, DC (Red Line--Judiciary Square). Call Shandon Brown at (202) 272-2282 to put your name on the guard's list for entry by COB Monday, December 9, 1991.
- SPONSOR:** Data Collection Methods Section
- ABSTRACT:** As part of the current effort to redesign the Current Population Survey (CPS), researchers from Census and BLS are using a variety of methods (i.e., behavior coding, interviewer debriefing, respondent debriefing, and item-based response analyses) to evaluate questions designed to elicit accurate labor force data and to assess the quality of interviewer-respondent interactions. During the first phase of a two-phase CATI/RDD test (July 1990 to January 1991), three questionnaires were evaluated--the current CPS (version A) and two alternatives (versions B and C). The principal product of the first phase was a single alternative questionnaire (version D), which comprised the best questions from versions A, B, and C, as well as any new questions deemed necessary, given the findings from phase one. The speakers discuss the advantages and disadvantages of the various methodological techniques used in phase one and the results of the CATI/RDD test that led to the development of the alternative questionnaire for phase two (i.e., version D). Plans for further questionnaire testing are also outlined.

Program Abstracts--Cont'd

- TOPIC:** The Effect of Government Programs on Financial Performance: A Nonparametric Approach
- SPEAKER:** Gerald W. Whittaker, Economic Research Service
- CHAIR:** Dave Dillard, National Agricultural Statistics Service
- DISCUSSANT:** Douglas McManus, Federal Reserve Board
- DATE/TIME:** Monday, December 16, 1991, 1:30-3:00 pm
- LOCATION:** 1301 New York Avenue, NW, Washington, DC (13th & New York Ave.), Waugh Auditorium, in basement (Blue or Orange line - between Metro Center and McPherson Square). Call Linda Atkinson on (202) 219-0505 to place your name on the guard's list for entry.
- SPONSOR:** Economics Section
- ABSTRACT:** The study reports the results of an application of three nonparametric techniques to the comparison of farm financial performance with participation in government programs to performance without participation. A nonparametric cost efficiency measure is used to model the effects and interaction of government programs where there are multiple outputs. Bootstrapping and kernel density estimation are, then, applied to estimate the distribution of financial measures under different policies. The use of nonparametric methodologies requires no assumption about functional forms or variable distributions. The nonparametric approaches also allow the use of microeconomic survey data in a way that employs the survey design. Therefore, the analysis is applicable to the whole survey population.

Washington Statistical Society Short Course

- TOPIC:** Statistical Graphics, Information Design, Scientific Visualization
- SPEAKER:** Edward Tufte, Yale University
- DATE/TIME:** Wednesday, February 12, 1992, 8:30 am - 5:30 pm
- LOCATION:** Waterford-Lalique Suite, Crystal Ballroom, Hyatt Regency Bethesda, 1 Bethesda Metro Center -- corner of Old Georgetown Road and Wisconsin Avenue -- Bethesda, MD. (Red Line --Bethesda; hotel parking is \$9.00 a day; parking lot behind the hotel is \$6.00 a day)
- REGISTRATION:** Registration is \$125 for members of the Washington Statistical Society and the American Statistical Association, \$150 for nonmembers, and \$75 for fulltime students. Nonmembers may join WSS for \$10 and pay the member fee (total \$135). Checks or purchase orders should be made payable to Washington Statistical Society.

Program Abstracts--Cont'd

To register, complete the yellow flyer in this newsletter and return it, with payment, to :

WSS Short Course
Glenn White
12701 Live Oak Court
Upper Marlboro, MD 20772.

Registration must be received by February 7, 1992. Early registration is strongly recommended. To receive written confirmation, enclose a self-addressed stamped envelope with your registration. For billing and registration questions, call Glenn White at (202) 874-1114 (W) or (301) 952-1507 (H).

**ADDITIONAL
INFORMATION:**

Course materials -- including Edward Tufte's two highly acclaimed books *The Visual Display of Quantitative Information* and *Envisioning Information* -- will be distributed from 8:30 - 9:30 am. Class runs from 9:30 am - 5:00 pm.

Fee covers all course materials, continental breakfast and coffee breaks. Lunch can be purchased in the hotel or nearby for reasonable price.

ABSTRACT:

The statistical graphics portion of the tutorial will cover the following topics: How to interpret, present, and design statistical data in charts, graphs, and tables. Also graphics for data analysis. Choice of method of display: words, tables, semi-graphics, graphics, dynamic displays on computers. Production techniques: words and numbers, typography, color, layout. Supertables. Techniques to enhance printed graphics. Presentations of complex technical material. Choosing computer data displays. Avoiding reading errors. Slide shows and handouts. Setting up a graphics capability. Advanced techniques for envisioning complex information. Animations of data. Many examples, including the classics of data displays.

The session will also focus on information design. The word is complex, dynamic, multi-dimensional; the paper is static, flat. How are we to represent the rich world of experience and measurement on mere flatland? The essential issue for statistical displays and information design is to develop strategies that extend the *information resolution* of paper and computer screen--in particular, techniques that increase the *dimensionality* and the *density* of our displays. To envision information--rather than simply decorating data--is to work at the intersection of image, word, number, art. The instruments are those of writing and typography, of managing large data sets and statistical analysis, on line and layout and color. And the standards of quality--described here--are those derived from visual principles that tell us how to put the right mark in the right place. Topics include video, scientific visualization, multi-media--as well as paper.

Announcements--Cont'd

An Evaluation of the 1991 Quality Assurance in the Government Symposium

The 1991 Quality Assurance in Government Symposium, held on September 16-17, 1991, at the Hyatt Regency Bethesda, had representatives from various government agencies. A range of quality assurance experiences and professional specialties was featured. In the spirit of Quality Assurance, the participants were asked to evaluate the symposium. Below are some of the results from that survey.

There were 108 evaluations received out of 190 symposium participants. The symposium attendees were overwhelmingly government employees, with mathematical statisticians as the predominant professional field (27.8 percent). Substantial numbers of attendees were also employed in the quality assurance field (21.3 percent) and the economics field (21.8 percent). The distribution of quality assurance experience was bimodal, falling between 0-2 years or 5+ years. The average yearly age of the participants was spread fairly evenly among the categories of under 30, 30-39, and 40-49, with few participants over 50. The participants having bachelor's or master's degrees represented 82.9 percent, with few below a bachelor's degree or with a Ph.D.

The symposium was kicked off by a keynote speech from Ronald Snee, Manager, Quality Systems and Technology, Project Engineering Division at Dupont. The keynote speech was rated highly relevant by 44.4 percent of the survey respondents. The highlight of Snee's presentation was his slides, which were rated excellent by 93.7 percent of the respondents. Another highly rated session was Martha Curry's presentation on the IRS Cincinnati Service Center quality improvement initiatives, rated highly relevant by 58.6 percent of the respondents. Several largely attended sessions followed by their percentage of highly relevant ratings were Harold Johnson's (BLS) "Group Process Considerations" (43.4 percent), W. K. Childress' (Dow Management) "Conflict and Quality Assurance" (42.6 percent), Fritz Scheuren's (IRS) "Group Processes" (42.2 percent), and Linne Bourget's "TQM: The

Human Dimensions" (53.8 percent). The concluding session of the symposium was a panel discussion, which included Martha Curry, of the IRS Cincinnati Service Center, William Lockerby, of the Employment Standards Administration, Michael Mersch, of the Census Bureau, and Fritz Scheuren of the Internal Revenue Service. The panel discussion was moderated by Jack Galvin, of the Bureau of Labor Statistics. The panel discussion was rated very favorably, with 88 percent of the respondents giving it a highly relevant or relevant evaluation.

The overall format of the symposium was rated favorably by the majority of the respondents, with 82.5 percent indicating that the allocation of time among the various topics "was about right." Overall, the symposium was rated relevant or better by 91.2 percent of the respondents. The facilities and food at the Hyatt Bethesda were enjoyed by all. Although 71.3 percent of the conference attendees had never attended the Quality Assurance in the Government symposiums previously, it might be expected that many of the participants will enhance their background and skills in quality assurance with additional courses in the future. (Article by Jonathan Daniels.)

Employment Vacancies

As a service to local statisticians, the Washington Statistical Society News provides notification of employment opportunities and descriptions of those seeking employment here in the Washington, DC area. Readers are encouraged to take advantage of this feature of the newsletter. The deadline for inserting notices is 5 (five) weeks before the publication date. Those interested should write to: Bill Arends, USDA-NASS, Room 4133 South Building, Washington, DC 20250-2000. Contact Mr. Arends at (202) 447-6812.

ASA/NSF/SRS RESEARCH FELLOWSHIP 1992-1993

Program on "On-Site Research to Advance the Quality of Science and Technology Resources Data"

Employment Vacancies--Cont'd

The National Science Foundation seeks senior researchers and recent doctorate recipients for a 1992-1993 ASA Fellowship within NSF's Division of Science Resources Studies (SRS). Research will be performed onsite at SRS, in support of current SRS institutional and population surveys, and may include:

- o Survey methodology;
- o Conceptualization and instrument design;
- o Data collection and reduction;
- o Quality improvement of surveys;
- o Confidentiality protection of data; and
- o Longitudinal survey design and analysis.

The fellowship stipend will be commensurate with qualifications and experience. Appointments will be for one year or a shorter period. Applications are due January 6, 1992. The Research Fellow will be in charge of overall technical direction of the conduct of research in his or her topics. The program is administered by the American Statistical Association. For general information about the program, contact Ms. Carolee Bush, ASA, 1429 Duke Street, Alexandria, VA 22314-3402; (703) 684-1221. For information on research topics, contact Dr. Kenneth M. Brown, Division Director, SRS, 1800 G Street, NW, Room L-609, Washington, DC 20550; (202) 634-4027.

FACULTY POSITIONS IN STATISTICS

The Department of Statistics/Computer & Information Systems, The George Washington University, invites applications for two tenure-track positions as Assistant Professor of Statistics. Candidates should have a Ph.D. in Statistics with interests in both theoretical and applied statistics and strong potential for research.

One of the positions is in the area of statistical computing. Applicants for this position should have a strong background in statistical algorithm development or statistical programming environments. For the other position, applications are invited in any area of statistics.

The department offers doctoral degrees in statistics; masters degrees in statistics,

industrial statistics, and statistical computing; and broad undergraduate programs in statistics and/or computer science. Duties of the positions include teaching at the undergraduate and graduate levels. The department also operates the Biostatistics Center, a major research facility for clinical trials and other medical investigations.

Candidates should send applications, including curriculum vitae, relevant reprints and three letters of reference to Professor A.D. Kirsch, Chairman, Department of Statistics/Computer & Information Systems, The George Washington University, Washington, DC 20052. Applications should indicate which of the two positions is sought and must be received by February 1, 1992. George Washington University is an equal opportunity/affirmative action employer.

ASSISTANT/ASSOCIATE/FULL PROFESSOR OF BIOSTATISTICS

A medical school Preventive Medicine/Biometrics Department seeks a Ph.D. biostatistician for a tenure-track faculty position. The level of appointment is dependent on demonstrated research productivity and teaching ability. Responsibilities include teaching medical and graduate students, methodological and collaborative research, and statistical consulting. Statistical computing experience is essential. Review of applications will begin on February 1, 1992, and applications will be accepted until the position is filled. Salary is commensurate with training and experience. Submit curriculum vitae and names of three professional references to: David F. Cruess, Ph.D., Professor and Director, Division of Biostatistics, Department of Preventive Medicine and Biometrics, c/o Civilian Personnel Office, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, Maryland 20814-4799. Equal opportunity/affirmative action employer.

SURVEY STATISTICIAN

The Washington Consulting Group, a fast-growing technical consulting firm at Dupont Circle in Washington, DC, has an opening for a Survey Statistician in its Quantitative Studies

Employment Vacancies--Cont'd

Group. The position requires experience in survey design, estimation and variance computation for complex surveys, and strong SAS skills. Please fax resume to Ms. Mamie Wilson at (202) 797-7806.

Job Applicant

Listed below is a brief description of the qualifications of an applicant seeking employment. Employers interested in interviewing this applicant should notify Bill Arends of their interest by CODE NUMBER. The request may be by mail -- at USDA/NASS,

Room 4133 South Building, Washington, DC 20250-2000 -- or telephone -- at (202) 447-6812 -- and should include the employer's name, organization, and telephone number. The applicant will be notified of the employer's interest and initiation of any further contact will be left to the applicant. All contacts will be kept confidential.

Code 92-01: Part- to full-time employment at GS-12 level in civil service is being sought by a statistician with an M.S. degree in applied statistics and an undergraduate degree in mathematics. Specialities are experimental design and analysis utilizing the minimum discrimination information statistics, multi-variate analysis, and the software packages SAS, Minitab, BMDP, Fortran, and Derive.

Looking for New Members

The Washington Statistical Society is interested in drawing in new members. WSS associate memberships are \$14 a year and entitle members to attend local events and receive the WSS News. If you know someone interested in joining WSS, please complete the form below and send it to:

Stephanie Shipp
1000 Riva Ridge Road
Great Falls, VA 22066

Potential New WSS Member

Name: _____

Address: _____

City/State/Zip: _____

Work Affiliation: _____

Person making recommendation: _____

Business phone: _____ Home phone: _____

THE
WSS NEWS EDITORS

WISH ALL OF YOU

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AND A
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