



March 1987

WASHINGTON
STATISTICAL
SOCIETY

NEWSLETTER

March 5	Thursday	A Generalized Cox Regression Model
March 16	Monday	Measuring Poverty with the Survey of Income and Program Participation
March 19	Thursday	Outcome in Pediatric Intensive Care: Multi-Institutional Validation and Applications
March 24	Tuesday	A Historical Look at William Sealy Gosset - alias 'Student'
March 25	Wednesday	Estimating Population Size by Recapture Sampling
April 8	Wednesday	Statistical Graphics and Information Design

Report from Newsletter Committee

BY MICHAEL COHEN, WSS EDITOR DESIGNATE

There is currently some interest in investigating whether any changes should be made to the Washington Statistical Society's Newsletter. To examine this possibility, a small committee has been formed consisting of the former editor, Julia Oliver, the current editor, David Judkins, and myself, editor-to-be. During the past few weeks I have talked at length with David and Julia, and others including Fritz Scheuren and Wendy Alvey, who generously gave of their time and expertise. The main purpose of these discussions was to gather as wide a collection of ideas as possible. It should be stressed that this effort is not the result of any perceived failing of the current newsletter but rather one to determine if a very good product could be even further improved.

The ideas suggested can be categorized as changes to the presentation or design, timeliness, distribution, general content, and content of the occasional front article. Some possibilities for presentation are the use of higher quality paper, a continuation of the logo as a header on inside pages, the use of more fonts or even color, the inclusion of photographs, etc. With regard to timeliness, there is the often raised possibility of the use of first class mail. Another idea is to have abstracts transmitted to the editor on disk. As far as distribution, the idea of setting up an electronic bulletin board for meetings, jobs, etc. was discussed.

Ideas for additions to the general content were the addition of notices of recreational outings, news from agencies, material sometimes found in the COPAFS or APDU newsletter, lists of publications of interest in recent issues of major journals, abstracts of such papers, book reviews, notices of interest to young statisticians, etc. The lead article presents a number of opportunities. Up until now it has provided WSS members with interesting pieces on the history of statistics in Washington, D.C., as well as descriptive articles on the various agencies, university programs, etc. This piece could be expanded into a methodological section, communicating interesting new ideas for solving problems of general interest, in addition to the two purposes mentioned above.

WASHINGTON STATISTICAL SOCIETY PROGRAM CHAIRS

Agriculture & Natural Resources
Ron Bosecker 447-3895
Maurice Owens 734-4379

Economics
Lynda Carlson 252-1112

Physical Sciences & Engineering
Donald Gantz 425-3931

Employment
Evelyn Kay 331-1153

Public Health & Biostatistics
Jai Choi 436-7047
Mary Foulkes 496-6818

Social & Demographic Statistics
Lee-Ann C. Hayek 357-1587
John Czajka 484-9220

Statistical Computing
Harry Foxwell 872-8058
Sally Howe 921-3395

Short Courses
Virginia deWolf 366-5361
Terry Ireland 301-859-6104
Andrew A. White 436-7022
Glenn White 763-5248

Methodology
Mary Mulry 763-7140
Bill Winkler 252-2140

Newsletter Editor
David Judkins 251-1500

Report from Newsletter Committee (continued)

Finally, the possibility has been raised of a bi-annual edited compendium of papers given to the WSS during the year, possibly including the lead articles from the newsletter, interviews, etc.

The newsletter committee will proceed as follows. The above suggestions will be collected into a type of questionnaire and mailed in mid-February to some members of the WSS. These will be selected heads of statistical agencies, members of university departments, past presidents of the WSS, as well as statisticians new to our society. The answers received from this questionnaire will be combined in some way into a proposal which will be brought before the WSS board members in April, for full discussion. At this point we are in a wish list mode of thinking, but soon cost will become an essential consideration. It is quite possible that no changes will be made to the newsletter. However, there may be a general sentiment for some particular change. We will then proceed in that direction. If anybody not receiving the questionnaire has any comments, please call or write:

Michael Cohen
School of Public Affairs
Morrill Hall
University of Maryland
College Park, MD 20742
(301) 454-7613

Any further developments will be mentioned in subsequent reports.

Program Abstracts

TOPIC: A Generalized Cox Regression Model
SPEAKER: David Zucker, NHLBI
CHAIR: Erica Brittain, NHLBI
DATE AND TIME: Thursday, March 5, 1987; 1:30 to 3:30 p.m.
LOCATION: Landow Building, Conference Room E,
 7910 Woodmont Avenue, Bethesda, Maryland
SPONSOR: Public Health & Biostatistics
ABSTRACT: This talk will discuss a generalization of D. R. Cox's well-known regression
 model for censored survival data analysis. In the generalized model, the
 regression coefficients are allowed to depend on time. Where the regression
 parameter function has a known form (e.g., polynomial), the generalized model
 may be re-expressed as an ordinary Cox model with specially constructed time
 dependent covariates. The talk will focus on the contrasting situation in which
 no advance assumptions on the form of the regression parameter function are
 made.

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Program Abstracts (continued)

TOPIC: Measuring Poverty with the Survey of Income and Program Participation
SPEAKER: Roberton Williams, Congressional Budget Office
CHAIR: Denton Vaughan, Social Security Administration
DISCUSSANT: Daniel Weinberg, Office of Income Security Policy, DHHS
DATE AND TIME: Monday, March 16, 1987; 12:30 to 2:00 p.m.
LOCATION: Martin Luther King Memorial Library, Auditorium A5
901 G Street, N.W., Washington, D.C.
SPONSOR: Social & Demographic Statistics
ABSTRACT: The Survey of Income and Program Participation (SIPP) collects income data by calendar month and enables the construction of family and household composition by calendar month as well. With such data it is possible to measure poverty status on a monthly basis. Bob Williams will discuss research that he and Pat Ruggles (of The Urban Institute) have conducted on the monthly incidence of poverty and transitions into and out of poverty. Monthly data from SIPP are used to calculate alternative measures of poverty under a range of definitions. These poverty measures are compared with CPS-based measures to demonstrate differences due to data collection and definitions. Estimates of transitions are also discussed.

TOPIC: Outcome in Pediatric Intensive Care:
Multi-Institutional Validation and Applications
SPEAKER: Murray Pollack, GWU School of Medicine and
Childrens Hospital National Medical Center
CHAIR: Lisa Kammerman, GWU School of Medicine and
Childrens Hospital National Medical Center
DATE AND TIME: Thursday, March 19, 1987; 1:30 to 3:30 p.m.
LOCATION: Landow Building, Conference Room A, 7910 Woodmont Avenue, Bethesda, Maryland
SPONSOR: Public Health & Biostatistics
ABSTRACT: The Physiologic Stability Index (PSI), an objective measure of pediatric intensive care mortality risk, and other population characteristics were measured prospectively in 2394 patients from 9 pediatric intensive care units. The observed numbers of survivors and nonsurvivors were compared with the predicted numbers of survivors and nonsurvivors calculated from a logistic function derived from data on 822 patients at one institution. Patient populations differed significantly with respect to population characteristics (e.g., age, chronic disease, emergency admissions). Most important, mortality rates of the ICUs also differed significantly (range 3.0% to 17.6%). The mathematical function based on the PSI and age reliably predicted the outcomes in all ICUs. Thus, mortality rate differences in these ICUs could be explained by the differences in severity of illness of the populations.

A modification of the PSI, the Dynamic Risk Index, is an acute (<24 hour) mortality risk predictor also validated in this population. The applications of both of these predictors to quality assurance and cost-containment will be illustrated.

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Program Abstracts (continued)

TOPIC: A Historical Look at William Sealy Gosset - alias 'Student'
SPEAKER: Phil Boland, Department of Statistics, University College, Dublin, Ireland
CHAIR: Don Gantz, George Mason University
DATE AND TIME: Tuesday, March 24, 1987; 12:30 to 2:00 p.m.
LOCATION: Room 2736, GAO Building, 441 G Street, N.W., Washington, D.C.
(Call 523-1760 to arrange building entrance.)
SPONSOR: Physical Sciences & Engineering
ABSTRACT: A brief historical survey will be given of the man who became famous as the 'Student' of Student's test of significance. Excerpts from various articles and letters will be used to highlight the contact Gosset had with both Karl Pearson and Ronald A. Fisher.

TOPIC: Estimating Population Size by Recapture Sampling
SPEAKER: Tapan Nayak, George Washington University
DISCUSSANT: Thomas Mazzuchi, George Washington University
DATE AND TIME: Wednesday, March 25, 1987; 12:30 to 2:00 p.m.
LOCATION: Room 2736, GAO Building, 441 G Street, N.W., Washington, D.C.
(Call 523-1760 if you plan to attend in order to assure building entrance.)
SPONSOR: Methodology
ABSTRACT: A design called recapture debugging is proposed to get extra information to estimate the original number of faults, N , in a reliability system. The system is observed for a fixed amount of time T and the failures are assumed to follow an exponential law with an unknown common parameter L . The moment and maximum likelihood estimators of N and L are derived and compared with existing estimators. The recapture sampling provides substantially more information and improved estimators compared to the standard experiment if T is not small. Significance tests for testing hypotheses about N and L are developed. Finally, for testing the system one can consider T to be determined sequentially and we present a suitable stopping rule.

TOPIC: Statistical Graphics and Information Design
SPEAKER: Edward Tufte, Yale University
DATE AND TIME: Wednesday, April 8, 1987; 12:00 to 1:30 p.m.
LOCATION: Room 2736, GAO Building, 441 G Street, N.W., Washington, D.C.
(Call 523-1760 if you plan to attend in order to assure building entrance. Note time of talk.)
SPONSOR: Methodology

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Other Announcements

Titles from the Past

BY RICH ALLEN, *WSS SECRETARY*

It is common, when celebrating a major anniversary, to look back at events at different intervals in the past. In that vein, titles from the 60 years of WSS presentations were reviewed. It may be of interest to see how topics have advanced throughout history. Or it may be of interest to see how program themes repeat themselves.

There are no listings of program topics from 60 years ago or 50 years ago. The WSS was a small, closeknit organization at that time and we can surmise that members were well familiar with the work of the other members and offered opinions and suggestions freely without the need for formal presentation.

The program formats of 40 years and 30 years ago remind us that Washington, D.C. was once a city without statisticians scattered in far flung suburbs. Most program sessions during those eras started at 8:00 p.m. and often included multiple presentations (3 or 4 papers on one topic were quite common).

The programs of 40 years ago included some topics which we should hope we will never need again. One presentation was "On Sorting Ammunition by Statistical Methods in the Normandy Invasion" and another program included 3 papers on the topic "Statistics in Combat Operations". On a more hopeful note that same season was a presentation on "Some New Federal Statistical Plans and Programs". Another interesting title was a 3 paper presentation of "Problems of Phrasing in Opinion Surveys".

Thirty years ago the program included 4 speakers on "Statistical Evaluation of the Polio Vaccine" and 8 papers on "Improving the Quality of Statistical Surveys". There were also 2 sessions of 3 speakers each on the intriguing titles of "Designs, Data, and Deductions" and "Experimental Potpourri". Some titles of 30 years ago might seem timely today such as "Eight Lectures on Computers and Automation" (including one on Long-term Consequences) and "Statistics and the Agricultural Crisis" which dealt with concerns about drops in prices and income. There was also a presentation by Congressman Bolling on "The Role of Statistics in Economic Policy Making".

Twenty years ago program sessions often included presentations in combination with a luncheon but many sessions were still held in the evenings. One evening session was on Chronic and Long-term Disease Studies including "The Role of the Statistician in Cancer Control". One attention grabbing topic was "Is Sequential Analysis a Hoax?". Two lunch sessions that year were oriented to "junior level" statisticians as they covered "The Job Market in Transition" and "The Statistician Shortage--A Partial Solution".

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Other Announcements (continued)

Washington Academy of Sciences Seminar

On Thursday, March 19, Eugene Rasmusson from the National Weather Service (retired) will speak on "Global Climate Variability: Recent Trends and Future Outlook." The talk will be held at the Mary Grayden Center, American University, at 8:30 p.m. Preceding Dr. Rasmusson's presentation, there is a social hour at 6:45 and a dinner at 7:30. There is a charge for the social hour and dinner. Reservations must be made one week in advance by calling 320-3621. There is no fee for attendance of only the lecture.

WSS Election

The election of new officers for the 1987-1988 program year will be conducted by ballot in a special mailing in April. The following have agreed to run for office:

For Vice-President and President-Elect:

Rich Allen (USDA)
Susan Ellenberg (NIH)

For Methodology Program Chair:

David Marker (Westat)
Brad Schultz (Washington Consulting Group)

For Representatives-at-Large: (two to be elected)

Dwight Brock (NIH)
Connie Citro (NAS)
William Bell (Census)
David Judkins (Westat)

For Secretary:

Marie Argana (Census)

Candidates other than these may be nominated by petition of at least thirty (30) members of WSS, provided that such a petition is received by the Nominations and Elections Committee at least 2 weeks before balloting. Any petitions must be received by Mary Grace Kovar, Room 2-58 NCHS, 3700 East-West Highway, Hyattsville, MD 20782, by April 1, 1987.

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Other Announcements (continued)

Census Bureau's Third Annual Research Conference (ARC III)

The program for the Census Bureau's Third Annual Research Conference has been set. Response to the Bureau's first "Call for Papers" was overwhelming. More than 115 abstracts were received from which only 30 could be selected. The choices were very difficult; many fine papers and ideas had to be turned away.

ARC III is scheduled to begin Sunday evening, March 29, 1987, and run through 2 p.m. on Wednesday, April 1, 1987, at the Omni International Hotel in Baltimore, Maryland.

The overall theme is "Improving the Quality of Survey Results." The program will devote one session to each of 14 topics within the overall theme, and also include the Shirley Kallek Memorial Lecture. Session topics include historical perspectives on quality, quality issues in economic data, questionnaire design for automated interviewing, automating the survey process, designing automated data editing systems, effects of confidentiality protection methods on data use, issues in response error, quality improvements in statistical programs in Mexico, modeling survey estimates, quality of housing statistics, evaluation of imputation procedures, designing quality into censuses and surveys, management issues in surveys and censuses, and quality issues in income statistics.

For additional information contact Carolee Bush, Office of the Director, Bureau of the Census, Washington, D.C. 20233; (301) 763-4900.

New Lecture Format

The Washington Statistical Society is considering initiating a topic-contributed paper seminar series. The format would be similar to the contributed paper sessions at the annual meeting of the American Statistical Association. Each seminar would include 3 to 4 speakers with a discussant, each speaking for 15 minutes about some aspect of a single topic.

Anyone interested in presenting a contributed paper in such a series should contact the appropriate program chair in writing, with a title and brief abstract. Please keep in mind that sessions will be organized only when there is a sufficient number of papers concerning a single topic. Anyone interested in organizing a contributed paper seminar should contact the appropriate program chair by telephone.

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Employment Column

Deadline for inserting notices is five weeks before the publication date. Send notices and requests to:

Evelyn R. Kay
520 - 22nd Street, N.W.
Washington, D.C. 20037
(202) 331-1153

Job Openings

Dynamac Corporation, an environmental and engineering research firm, has an immediate opening for a Statistician to analyze toxicology data and to do quantitative risk assessments to determine health risks/effects. Qualified applicants should have a BS degree, 3-5 years of experience in biostatistics and quantitative risk assessment, and good written and oral communication skills. Knowledge of toxicology and computer programming in SAS and BMDP and knowledge of EPA, FDA regulatory procedure for toxic substances is desirable. To apply, send resume in confidence to: DYNAMAC Corporation, Personnel Dept., 11140 Rockville Pike, Rockville, MD 20852.

A Washington-metropolitan area based consulting firm has prospects for several openings in the area of applied statistics, systems analysis, simulation, and forecasting. Applicants need to have experience with microcomputers, programming, and good writing skills. One of the positions is for a marketing manager with at least 3 years of experience with Government contracting, proposal preparation, and bidding process. Two part-time research assistantships are envisioned for graduate students currently enrolled in statistics, operations research, or computer science curricula. Send resume and academic credentials to: TTI, 115 St. Andrews Drive, Vienna, VA 22180

Mathematical Statistician required for research and consulting in group with 3 applied statisticians. Ph.D. preferred. Strong math/stat background and consulting experience. Research could include survival analysis, multinomial models, and sample surveys. Salary \$27,172 - \$38,727 (GS 11-13). Send resume/SF-171 to Christine Bunck, Patuxent Wildlife Research Center, U.S. Fish & Wildlife Service, Laurel, MD 20708, (301)498-0392.

JOB APPLICANT

Listed below is a brief description of the qualifications of an applicant seeking employment. Employers interested in interviewing this applicant should contact him directly as indicated.

Code Number: 87-04

Telephone: (H) 301/776-6271 (O) 202/483-4184

Position wanted:	Research statistician, Research assistant
Education:	BS (Biometry) Iowa State; MS (Experimental statistics) Louisiana State
Skills:	Strong science and agricultural background. Knowledge of SAS, SPSS.