Executive Committee

2002 ~ 2003

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FROM THE DIRECTOR

Welcome back to what promises to be another exciting year at CSSS! We welcome Elena Erosheva, our new core CSSS faculty member who is jointly appointed in Statistics and Social Work. As far as we know, hers is the first such joint appointment in the nation, and opens up exciting prospects for collaboration between the two disciplines. There is a profile of Elena inside.

CSSS is now just three years old, and already our efforts to promote collaboration between social scientists and statisticians are bearing fruit and gaining national recognition. We just learned that biostatistician Patrick Heagerty and political scientist Michael Ward have won the Miller Prize for the best article published in 2001 in Political Analysis, the leading journal of methodology in political science. The prize was awarded for their article “Windows of Opportunity: Window Subseries Empirical Variance Estimators in International Relations,” which breaks new ground by applying modern statistical methods for dependent data to the analysis of war and peace. This work was funded by a CSSS seed grant and is the first known collaboration between a political scientist and a biostatistician.

In further recognition, the book by CSSS core faculty members, Martina Morris and Mark Handock, Divergent Paths: Economic Mobility in the New American Labor Market, has been awarded the Richard A. Lester Prize for the Outstanding Book in Labor Economics and Industrial Relations published in 2001. This prize is awarded annually by the Industrial Relations Section at Princeton University. The Princeton Industrial Relations Section will also include this book in their widely-circulated list of Outstanding Books for 2001.

Kate Stovel has taken over as CSSS Seminar Director and has lined up an exciting seminar series. This quarter features speakers from psychology, geography, political science, sociology and anthropology. Upcoming outside speakers include CSSS visitors John Logan (Wisconsin Sociology) and Pip Pattison (Melbourne Psychology). John and Pip will be sitting in the CSSS suite in Padelford C-14, so please stop by and greet them. Coffee and cakes will be provided after the seminars in the Sociology Commons next door to the seminar room, so please stay for a few minutes after the seminars to chat with the speaker and fellow CSSSers.

New this year are the three CSSS-based Ph.D. tracks in the Departments of Statistics, Sociology and Political Science. These opportunities are unique in the nation, and will allow students to emphasize statistical methods for the social sciences in their graduate work, from the different perspectives of their home disciplines. The requirements for each track include a range of CSSS courses.

This year, CSSS is again offering a rich menu of courses for social science graduate students, this quarter including courses on log-linear modeling and logistic regression, and multivariate data analysis for the social sciences. Next quarter’s offerings will include Hierarchical Modeling for the Social Sciences, and Statistical Analysis of Networks. Check these out on our web site, where you will also find details of our other activities.
New Faculty Member Elena Erosheva Connects CSSS to the School of Social Work

CSSS is an anomaly to academia: Its very premise tests territorialism (a trait most academics will attempt to deny), and brings together disciplines in one office space—not through endless e-mail conversations or interdepartmental meetings—but through individuals who specialize in statistics and another subject. By providing a forum for the exchange of ideas between disciplines, the Center provides an invaluable service to the intellectual community on this campus.

Elena Erosheva, the Center’s latest recruit who will also be one of the Center’s youngest faculty members, embodies the CSSS mission. On one hand, she is purely academic—she has mathematics and statistics degrees under her belt—but on the other, she is an amateur dancer and ice skater, and she emphasizes the need to balance her physical and intellectual sides. “I try to maintain a connection with my physical self,” she said.

The Center has already brought in statisticians who focus on political science and sociology, and Erosheva joins the Center with an emerging knowledge of methods that apply to social work. Starting this fall, Erosheva will serve as a primary researcher and liaison between the CSSS and the School of Social Work here at the University of Washington.

The applicant pool for this position was competitive, CSSS Director Adrian Raftery said. He cited her work on health applications as one of the main reasons why CSSS and the School of Social Work chose her. Adding to her impressive research projects, Raftery spoke at length of Erosheva’s teaching qualifications. “She has created a nice course for the fall,” he said of the class Erosheva will teach this fall on statistical methods for social work Ph.D. students. “She’s an excellent teacher—she’s very clear.” Erosheva will teach two classes per year as an assistant professor.

A Russian native, Erosheva was born in Irkutsk, one of the oldest Russian cities of Siberia, which is situated in southeastern Siberia near Lake Baikal. She attended Novosibirsk State University, a university known for producing some of the world’s most elite scientists, engineers, and mathematicians. During this time, she met her future husband, Pavel Nikitin who recently joined UW as a research associate in the electrical engineering department. After graduating from Novosibirsk State University with a B.S. in mathematics and applied math, Erosheva obtained a Masters in Statistics from Utah State University.

Erosheva moved to Carnegie Mellon University in Pittsburgh, PA, where she earned her Ph.D in statistics in August 2002. Her dissertation is titled “Grade of Membership and Latent Structure Models With Application to Disability Survey Data.”

She has yet to determine exactly which research projects she will take on with the School of Social Work, but she has several ideas, some generated from her research at Carnegie Mellon which was focused on developing statistical methodology for understanding the structure of disability among the elderly people. She broadly defines the area of her research interests as statistical methodology for the social, behavioral, and medical sciences.
**Blalock Fellowships**

Four students received the CSSS-Hubert M. Blalock Fellowships this year. This year’s graduate student award was for $3,000. This fellowship honors Hubert M. Blalock, who was a leading sociological methodologist and social statistician at UW, a former President of the American Sociological Association, and one of the founding faculty members of the Statistics department here, as well as a longtime Professor of Sociology at the university. CSSS provides this award to scholarly students who have a strong interest in furthering their studies in statistics and the social sciences.

Here are this year’s award winners. Ryan Admiraal holds a B.S. in Mathematics and English from Calvin College and is entering the Statistics graduate program. Eric Aldrich holds a B.S. in Economics from Duke University and is also entering the Statistics graduate program; he has been doing research with Professor Mark Handcock. Rachel Kuller is entering the Sociology graduate program. For her this is a significant career change: she holds a B.S. in Engineering from Harvard. And Nicholas Pharris-Ciurej is also entering the Sociology graduate program, having obtained a B.A. in Sociology from Seattle University.
Awards

Statisticians and UW Top Math Citations

Three of the 25 most highly cited mathematical scientists in the world in 1991-2001 were UW statisticians. These included CSSS Director Adrian Raftery at no. 9, as well as Statistics professor Elizabeth Thompson at no. 4, and Biostatistics professor Norman Breslow at no. 25. CSSS affiliate and statistics professor Julian Besag was also named as one of a small group of Highly Cited mathematical scientists. Breslow is a former CSSS seminar speaker.

Overall, 18 of the 25 most cited mathematical scientists in the world in 1991-2001 were statisticians or biostatisticians. And the Journal of the American Statistical Association was by far the most highly cited journal in the mathematical sciences in the same period, more than 50% more than the next most highly cited journal. Three of the world’s top four mathematical journals were statistical journals (the other two were Biometrics and the Annals of Statistics).

The University of Washington was ranked as the world’s top university in terms of the impact of the articles it produces in the mathematical sciences, and the university’s statisticians made a major contribution to this.

Raftery’s most cited articles are on Bayesian model selection and Bayesian model averaging, especially in the social sciences, model-based clustering, and inference for deterministic simulation models. Thompson is a world-renowned statistical geneticist. Breslow’s work is on biostatistical methods in case-control and cohort studies and in epidemiology, while Besag is one of the world’s leading spatial statisticians.

This information was compiled by the Institute for Scientific Information, which publishes the Science Citation Index, the Social Sciences Citation Index and the Web of Science. It was published in the May/June 2002 issue of their magazine Science Watch.

Richard A. Lester Prize

The book Divergent paths: Economic Mobility in the New American Labor Market, by professors Martina Morris and Mark Handcock, has been awarded the Richard A. Lester Prize for the Outstanding Book in Labor Economics and Industrial Relations published in 2001. The prize is awarded annually by the Industrial Relations Section at Princeton University. Richard Lester, a former Princeton Faculty member and Dean of Faculty, was a pioneer in institutional labor economics, and an advisor to President Kennedy on unemployment insurance, minimum wages and discrimination.

Co-authors Morris and Handcock came to the University in 2000 after the UW tapped its University Initiatives Fund to create the Center for Statistics and Social Sciences. Although Divergent Paths was well under way by then, the center fosters interdisciplinary collaboration between sociologists and statisticians.

Divergent Paths capped five years of work by Morris, Handcock and their co-authors, Annette Bernhardt, senior policy analyst at the Brennan Center for Justice at New York University, and Marc Scott, assistant professor of educational statistics at New York University.

“The purpose of this book is to push researchers and policy makers toward a sustained focus on how the life chances of American
workers have changed,” they write. “Upward mobility—the hallmark of this country—hangs in the balance.”

One of the grimmest trends the authors probed was the growing gap between high and low achievers. The chasm widened 20 percent—not because those at the top did so much better, but because those at the bottom did so much worse. Not only that, but the number of people mired in low-wage jobs more than doubled—from 12 percent in the first cohort to 28 in the second.

Morris cites two ways in which the country has so far “managed itself around” declining wage gains. “People have futures and they continue to mortgage them,” she says. Plus the migration of women into the workforce has helped keep median household incomes steady. But neither Band-Aid can last forever if wage gains remain stagnant. And both come with a price as people saddle themselves with consumer debt—the average household with credit cards carries a monthly debt of $4,000—and devote less time to family life, notes Morris.

Miller Prize

The Warren Miller Prize is awarded each year for the best work appearing in the journal, “Political Analysis.” CSSS associates, Patrick Heagerty (Biostatistics) and Michael Ward (Political Science), along with their collaborator, Kristian Gleditsch (UCSD) were recipients of the 2002 award for their work (Political Analysis, Volume 10: 304-317), “Windows of Opportunity: Window Subseries Empirical Variance estimators in International Relations.” Models in the field of international relations are typically sculpted to analyze relations that are inherently dependent. For example, Israeli interactions with the Palestinian authority are heavily dependent on the Palestinian authority’s interactions with Israel. However, most empirical statistical models of interactions ignore this interdependency, even as they attempt to unravel it. This article develops and applies a method that provides a nonparametric way of helping to correct for this oversight in the inferences drawn from such statistical work. The approach presented by Heagerty, Ward, and Gleditsch has been quickly adopted and employed in several prominent studies. In a practical way, the article show how many scholars using standard, panel regression methodologies had much greater confidence in their statistical results than was justified.

The collaboration between Heagerty and Ward was initially supported by a seed grant from the CSSS. The Miller award is named after Warren Miller (1924-1999) who founded the Center for Political Studies at the University of Michigan and initiated a series of biennial surveys before and after each national election, a series known as the American National Election Studies. Warren Miller also established the Inter-University Consortium for Political and Social Research, which now houses the largest archive of quantitative social science data in the world. His scholarly writing focused on analysis of the U.S. electorate, especially his early book entitled, “The American Voter.” Miller was also a frequent consultant for national news organizations and is credited with the origination of the term “projection” to describe anticipated election results.

The award committee consisted of Gary King (Harvard), Larry Bartels (Princeton), and Henry Brady (UC-Berkeley).
19th Annual Political Methodology Meetings
UW
July 18-20, 2002

This summer, Professors Michael Ward, Political Science, and Kevin Quinn, CSSS and Political Science, organized the 19th Annual Political Methodology Conference. The Conference, which is the leading conference of its type, was held on the University of Washington campus this past July. The fact that it was attracted here is a tribute to Professors Ward and Quinn, and a boon for the Political Science department, CSSS, and the university as a whole. “CSSS was delighted that they had the funds to contribute,” said Adrian Raftery, who had the opportunity to attend and see at first hand.

Political methodology deals, in large part, with the development of statistical methods for political science problems. Research presented at the conference included work that dealt with making causal inferences from observational data, deriving statistical models from formal theoretical models, methods for ecological inference, and robust estimation of overdispersed multinomial models, among many other topics.

Quantitative political methodology is undergoing something of a renaissance. This was evidenced at the conference by the quality of the presentations and the discussions they generated. “The conference was certainly one of the most intellectually exciting ones I have participated in quite a while,” said Raftery, who gave the plenary address.
Seminar Series

Oct. 9  Jamie Jones (CSSS and CFAR) “Sexual Network Scaling and Epidemic Thresholds”

Oct. 16  Lowell Hargens & Barbara Reskin (Sociology) “Picturing Segregation: The Structure of Occupational Segregation by Sex, Race, Ethnicity, and Hispanicity”

Oct. 23  Anthony Greenwald (Psychology) “Using Large Data Sets to Improve Validity of the Implicit Association Test – A Latency Based Cognitive Measure”

Oct. 30  Steve Majeski (Political Science) “Does Asymmetric Power Help Agents Generate and Maintain Cooperation in Competitive Games?”

Nov. 6  Pip Pattison (University of Melbourne) “Networks and Neighborhoods: Modeling generalized network structure”


Nov. 20  Becky Pettit and Jen Hook (Sociology, CSSS Seed Grant Recipient) “The Structure of Women’s Employment in Comparative Perspective.”

Nov. 27  Day Before Thanksgiving – no seminar


Dec. 11  To Be Announced

The University of Washington is committed to providing access, equal opportunity and reasonable accommodation in its services, programs, activities, education and employment for individuals with disabilities. To request disability accommodation contact the Disability Services Office at least ten days in advance at: 206-543-6450/V, 206-543-6452/TTY, 206-685-7264 (FAX), or dso@u.washington.edu

Stat-Game Theory Working Group

Anton Westveld

Decision making under uncertainty has long been an area of interest to a wide variety of academic disciplines: statistics, computer science, political science, economics, biology, and philosophy, to name a few. The main mathematical method for examining multi-agent decision theory has been game theory. However, the game theoretic solutions of some simple games have been called into question. Recent work has shown that statistical methodology can vastly improve the results derived from game theoretic models. In addition, when data on actions or outcomes resulting from a decision process, where at least two individuals are involved (marriage, conflict, voting, etc.), it might be of interest to incorporate game theoretic concepts into a statistical analysis. The purpose of the group is the exploration of these ideas, as well as, how they relate to social networks and graphical models.

Katherine Stovel, Seminar Director, opens this year’s series to a packed house.

Avery Ke, a devoted seminar attendee.

The group consists of both faculty and graduate students and is in the inter-disciplinary spirit of CSSS. Currently, the group meets from 10:00 – 11:00+ on Thursday mornings in the CSSS conference room. For additional information feel free to contact: Peter Hoff, Kevin Quinn, or Anton Westveld westveld@stat.washington.edu.
University of Washington, Seattle.

Tenure-track Assistant Professor, joint in the Department of Statistics and one of the Departments of Anthropology, Economics, Geography, Political Science, or Sociology, as part of the Center for Statistics and the Social Sciences (CSSS), (www.csss.washington.edu). We seek a faculty member contributing at the cutting edge to the development of statistical methodology relevant to the social sciences. Duties include new course development, teaching, and methodological and collaborative research. Ph.D. required by date of appointment. Send CV and 3 letters of recommendation to Gayle Gray, Administrator, CSSS, Box 354320, University of Washington, Seattle, WA 98195-4320. Priority will be given to applications received by December 15, 2002. The University of Washington is building a culturally diverse faculty and strongly encourages applications from women and minority candidates. AA/EOE.
The University of Washington is home to the Center for Statistics and the Social Sciences (CSSS), an innovative interdisciplinary center designed to promote collaborative research between social scientists and statisticians and to provide cutting edge training to graduate students interested in the application of statistical methods to the social sciences.

CSSS courses are taught by professors with extensive experience with the subject matter and are designed to be both rigorous and accessible to social science graduate students.

**THREE PH.D. TRACKS OFFERED**

- **political methodology**
- **sociological methodology**
- **social statistics**

**FACULTY**

- Julian Besag, Statistics
- Elena Erosheva, Statistics and Social Work
- Mark Handcock, Statistics and Sociology
- Peter Hoff, Statistics
- Marina Morris, Sociology and Statistics
- Ross Matsueda, Sociology
- Kevin Quinn, Political Science
- Adrian Raftery, Statistics and Sociology
- Thomas Richardson, Statistics
- Katherine Stovel, Sociology
- Michael Ward, Political Science
- Suzanne Withers, Geography
On September 28th, students, faculty and friends hiked on the Tolmie Peak/Eunice Lake Trail starting from Mowich Lake in Mt Ranier National Park. Photos by Eric Aldrich.