

Section U (Statistics) Business Meeting Minutes
February 14, 2004
Seattle, WA

Present: Nancy Flournoy, Mary Foulkes, Steve Lagakos, Don Guthrie, John Gardenier, Kathryn Chaloner, Rob Kass, Jim Gentle, Ron Brookmeyer, Julie Shaffer, Carol Redmond, Jolene Jesse, Snehalata Hururbazar, Joe Cavanaugh, Claudia Sturgis, Teri Gardenier, Karen Bandeen-Roche, Steve Anderson, Don Kennedy

The Business meeting opened at 10 am.

Statistical review in *Science*

Julie Shaffer & Ingram Olkin initiated the discussion the statistical review of articles in *Science*, several years ago. The *Science* editorial decision was to initiate an experiment. Ron Brookmeyer summarized that experience. The overall goal was to improve the statistical level of papers published in *Science*. Statistical reviewers received on average one paper per week, quick turn-around was required, an enormous amount of work. The papers were a mix from many on the editorial staff, some being sent out simultaneously for review. For some, presentation of elementary statistics was the main issue. The experiment lasted 5-6 months, was considered very successful, and had an impact. Brookmeyer's take was that not all papers needed detailed statistical review. Other papers did require more stat review. The statistical review needed different levels, papers that were accepted for publication might need quick turnaround review, for other papers the statistical review was brought in early-on. Hybrid approach might be required, with very quick turn around. *Science* Executive Editor-in-Chief Don Kennedy's reaction was that experiment was partly a success and partly a failure because of overburdening Brookmeyer. *Science* editors learned a lot from the process, determined to persevere. Really need to put somebody on the board to work in this regard, couple of people, single them out, appointed Bill Cumberland, who has seen about 50 papers. Papers are going out to Cumberland earlier in the process, and he could identify those papers that will need more statistical attention. *Science* is better off now than before this experiment. Kennedy ran through the in-house process, in-house editors then Board of Reviewing editors (who w/in 24 hour, give a numerical ranking), then decide to send it out for further review or send it back to the authors. The in-house editors identify outside reviewers.

Rob Kass considers almost all the action to be in the supplementary material. Kennedy thinks *Science* is now doing much better. In the past, *Science* was less careful, now editors review supplementary as thoroughly. *Science* on-line site licenses are held by 1000 institutions, and by whole countries like Sweden and China. The on-line versions become the archive, as science becomes more technologically dense. Need to use the print space to make the information more accessible. Need to retain the archival possibilities.

Brookmeyer suggested the need for raw data especially for graphs and figures. He didn't need to replicate analyses, but did need to see data. It is not clear what constitutes raw data, and what constitutes processed data. Example, Harvard 6 cities study. What lies between figure in the paper and the raw data? There was serious concern at *Science* over the Schon papers, and faking data. Nancy Flournoy described an example of microarray data. Imagine an evolution to electronic versions available, but never a printed version.

Lagakos described statistics reviews in medical journal. Statistics content is essential because medical papers may rely much more on empirical evidence. Kennedy indicated that medicine has been used to this level of empiric evidence because it sees so many clinical trials.

John Gardenier asked if there were any feedback from authors given suggestions. Kennedy reported that most authors appreciated the clarification of their language. He discussed the recent mathematical biology issue of *Science*. Kennedy said Bob May wanted to do this issue. The only person dismayed was Beth Rosener, because math doesn't attract advertisers.

Kennedy described the Harvard 6 cities study used by EPA to lower federal standards. Several industry groups demanded that Harvard release the datatapes. Harvard refused on the grounds of confidentiality (health records for individuals were involved). The Shelby (Sen Richard C Shelby, Rep-Ala) amendment would have released all federally-funded research records under FOIA. It went to OMB for comment, largely academic comments, and the scope was narrowed, then legislation (2002 Data Quality Act) followed. The Data Quality Act was limited, asking for peer review of agency findings, and a National Academy workshop. Comments to OMB website. AAAS website will also have place to comment. The general issue

is how information is being used and should be used to reach regulatory judgments. The new legislation has resulted in a confused situation.

The Section was asked to convey to *Science*, and to Kennedy in particular, any concerns. Kennedy indicated that the current statistical review process was not yet a perfect solution, but was an attempt to do better.

There was also discussion of the status of politicization of government review committees, for the present status contact Debbie Stein (who staffs COSEPP (Committees on Science, Engineering, and Public Policy, National Academies) at the National Academies). Since statisticians are trained to evaluate bias, statisticians should play a role. Also suggested contacting Maxine Singer, Maxine Singer, Chair of COSEPP (also the President of the Carnegie Commission).

The Section expressed appreciation to Julie Shaffer, Ingram Olkin, Ron Brookmeyer, Scott Zeger & Joan Rosenblatt for their contributions to the statistical review process for *Science*.

AAAS Fellows Programs

Claudia Sturges, the AAAS Director of Science and Technology Policy Fellowships Program, described the fellowships over the past 30 years. In the last 8 years, there has been huge growth in the program. It brings scientist to DC to work on Capital Hill or in federal agencies. Fellows learn the policy process. Approximately 1/3 stay on, 1/3 go back to their home institutions, and 1/3 use the fellowship as stepping stone in their career. The programs are held in high regard. The fellowship year could be a sabbatical. Everyone participating has Ph.D., they are selected thru a peer review process, with a ratio of acceptance about 60 out of 600. The fellowship program adheres to the AAAS motto of “advancing society, serving society”.

Rob Kass indicated that his brother-in-law strongly benefited from this program. The scope of available opportunities for fellows depends on where they land, e.g. on Capital Hill with a legislative specialist. An individual congressional office rarely has more than one scientist on staff, so that person needs to be a broad thinker, to see applications broadly. The Congressional Fellowship program selects (2 out of 106) applicants then the fellows select a congressional office. Other fellow programs, select fellow and then find a match to federal agencies. Recruiting costs total about \$90-100K.

Steve Anderson was a fellow at USDA. He emphasized biology and public policy, and saw the fellowship as an excellent way to accelerate his career, USDA from 1999 – 2001, then to FDA in CBER. He works in the area of BSE (bovine spongiform encephalopathy). He stressed the experience, social network, and interjecting science into policy process. His summary message was that the fellowship was a fabulous opportunity, strong contribution to career.

Reports from Section Reps & Affiliated Societies

Karen Bandeen-Roche reported on the ENAR/WNAR symposium on HRT & WHI. Garnet Anderson presented well at the press briefing. Karen also reported that the Medical sciences Section submits a limited number of Fellow nominations, and doesn't use its total allocation. Section U could nominate biostatisticians. In terms of the program planning, there were two sessions mentioned when they specifically wanted quantitative persons and emerging infections, e.g. SARS. Kathryn Chaloner also attended Medical Sciences section, and reported that they referred to providing funding for sessions.

Don Guthrie urged that Amstat News be used to let statisticians know which sessions will be on the program next year especially since the AAAS annual meeting will be in DC.

Action Item – Foulkes will post a notice in Amstat News

Julie Shaffer described her “No Child Left behind” symposium. She also summarized the Affiliates meeting, where Alan Leshner indicated that AAAS doesn't make good use of affiliates, and will be setting up a listserv. Also, he described the new outreach to public, including Saturday and Sunday Family Science days, Sunday afternoon Oceans for Everyone, and Science & National Security in the post 9/11 environment (website, data base and clearing house www.aaas.org/spp/post911). This is a new group at AAAS to discuss issues like visas for foreign students and post-docs (Patriot Act), select agents issues, existing rules not enforced until recently, Butler incident, restrictive clauses in fed grants and contracts, some schools turning down grants, scientific publication issues and regulating what can be published. A *Science* article about producing attenuated polio virus, “sensitive but unclassified” triggered reviving this designation. This post911 group will co-ordinate with other

affiliated societies. Shirley Malcolm discussed affirmative action, Supreme Court allowin use of holistic criteria, beyond admissions look at other things.

Action Item – Rob Kass will contact Math Sciences at the National Academy first rather than write to Maxine Singer about stats serving when questions relate to bias.

Jim Gentle reported from Section T, Information, Computing & Communication. There was a new session proposal on privacy and confidentiality by Gladys Kotter. Jim will suggest names for potential speakers.

New symposia proposals discussion

- Bandeen-Roche – biological underpinnings of aging, 3 topics on frailty
- Anderson – medical emerging technologies, gene therapy, xenotransplantation, newer vaccines, stat side of development
- Lagakos – defining endpoints, Dean Follman
- Flourmoy – el nino weather predictions, working with NISS Wikle (at U Columbia)
- Gentle – privacy & confidential
- J Gardenier – X-rated science: How can we tell? How can we judge?
- T Gardenier - Geographic indexes
- Chaloner – Stat in Society – new regulation of exceptions from informed consent , waiver of informed consent, 2 studies under new regulations, roger lewis, Don Berry (DMC) rescue children choking, another study in Texas biethicist, Joyce Martin from NCHS
- Social economics & political section – “Politics of Data”
- Industrial science & technology mtg – session proposals related to homeland security & space exploration
- Foulkes - Missing data
- Kass – brain-machine interface, robotic devices using signals from their brain

Mike Waterman suggested as a topical lecturer on bioinformatics & genetics

New AAAS fellows

The section extends congratulation to the new fellows: Kathryn Chaloner, Univ. of Iowa; Stanley Lemeshow, Ohio State Univ; Judith T. Lessler, RTI International

Introduction of new officers

Chair	Rob Kass
Chair-Elect	Ed Wegman
Member-at-Large	Agnes Herzberg
Nominating Comm	Dave DeMets
	Earl Pollack

The meeting was adjourned at 12:10pm.

Mary A. Foulkes, Secretary
AAAS Section U