

Back to the 1970's: Origins and Early Days of Caucus for Women in Statistics

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Abstract

At the annual statistics meetings in 1969 and 1970 I posted flyers that invited women to meet to discuss the need for a Women's Caucus. Ten women attended in 1969 and 45 in 1970. By early 1971 a core group organized the Caucus for Women in Statistics (CWS), and I agreed to be president even though early in my career. CWS obtained ASA affiliation in May 1971, considered to be our founding date. The mission of the CWS was to advance the education, employment, and careers of women in statistics, recognizing underrepresentation of women in our male dominated field and major sex discrimination. At JSM we sponsored paper sessions and business and social meetings. We petitioned ASA to form the ASA Committee on Women in Statistics. We produced a quarterly newsletter for members. We nominated qualified women for ASA fellows. We began discussions on mentoring and networking. Near the end of my three-year presidency CWS officers decided to recruit well known and experienced women statisticians for the CWS presidency, and the next four CWS presidents were ASA fellows. The Caucus not only benefitted from their leadership, but it achieved higher visibility and status within the ASA.

Key Words: Women's Caucus, CWS Mission, CWS Activities, Sex Discrimination, ASA Fellows, Joint Statistical Meetings (JSM)

1. Introduction

In preparing my remarks for this JSM invited paper session, I reflected back to the late 1960's to recall why and how I got involved in establishing the Caucus for Women in Statistics (CWS). I concluded that I was strongly influenced by both my personal and professional journeys from childhood into my early thirties, culminating in a feminist perspective at the beginning of my career in statistics. I'll summarize a few aspects of these journeys that influenced my actions in the late 1960's to start a Women's Caucus in statistics and summarize its beginnings and early days.

2. Childhood and Public School

I was born in 1939, at the beginning of WWII, into a working/lower class neighborhood of Baltimore City. My parents separated shortly after I began school, and my mother, infant sister and I moved into the small home of my maternal grandparents.

My love of math began in first grade in the Baltimore City public school system. I received encouragement and harder assignments from math teachers in both public

schools and college, in an era where girls were not expected to have interest or excellence in math.

In elementary school I decided that I must prepare myself to work full time and be a financially self-sufficient adult. This was not the social norm for girls or women at the time, but a goal that I internalized by observing my mother's financial dependence on her parents, not only for herself, but for her two daughters as well. I did not realize until I was a college student that my mother was schizophrenic, likely since her late teens.

As a child I developed determination, grit, and resilience as well as an ability to focus totally on goals that I set for myself. I simply could not allow myself to fail. These traits were useful in later academic and career pursuits when I experienced many instances of sex discrimination [Brogan (2014), Brogan (2017)].

3. College and Job Searches

When I attended Gettysburg College in PA there was no question that I would be a math major. My career goal was high school math teacher, modeling myself after my favorite public school teacher. During my sophomore year I took one education course, disliked it, and discarded my goal of becoming a high school math teacher.

I thought about physician or certified public accountant. My favorite math professor at Gettysburg, Dr. Fryling, dissuaded me from both options; he said these fields were hostile toward women. Unfortunately, he likely was correct. He suggested a doctoral degree in math or statistics and a university teaching and research career. He wanted to nominate me for a Woodrow Wilson fellowship that provided graduate school financial support for future college professors, but I declined his offer. I could not see myself as a college professor, perhaps because I had no female professors in four years at Gettysburg College, except for girls' health education. In fact, I never had a female professor in eleven years of college and graduate school education.

I was unable to find a job after graduation from Gettysburg in 1960 with a major in math and the 2nd highest GPA in my class of over 300 graduates. My minors were chemistry and psychology. Jobs were advertised as "Help Wanted Male" and "Help Wanted Female", and all technical or scientific positions were reserved for "males only", or more accurately, for "white males only". The following story illustrates the employment climate for women in 1960.

An IBM job interviewer visiting Gettysburg campus complimented me on having the highest score he had ever seen on IBM's math test and then offered me a job as secretary or sales assistant. I countered that I was interested in their advertised computer programmer positions, especially since I had the required qualifications and performed well on their own math test. He simply stated that they did not hire "girls" for those jobs, only "men", and terminated the interview.

4. Graduate School and More Job Searches

I enjoyed the limited statistics courses offered at Gettysburg College because I saw that they had immediate and interesting applications. Thus, I pursued a master's degree in statistics, hoping to increase my employment opportunities. I received acceptances and

teaching or research assistantships from University of Chicago, Columbia University, and Purdue University. I chose Purdue, got married during my first year there, and obtained a master's degree in applied statistics in 1962. However, I faced the same job search difficulties in 1962 as in 1960 and received no offers beyond the secretarial or clerical realm.

In fall 1962 my husband and I moved to Ames, Iowa where he accepted a humanities faculty position at Iowa State University (ISU), and I enrolled as a doctoral student in the Statistics Department. I was fortunate to be financially supported by an NIH training grant in biostatistics, even though ISU had no schools of medicine or public health, and I had no idea what "biostatistics" was. One summer I took biostatistics and epidemiology courses at University of North Carolina (UNC) School of Public Health for the "bio" part of my NIH training grant; I became fascinated with medicine and public health as application areas for statistics.

I obtained my Ph.D. in statistics in 1967 and received two job offers of Assistant Professor: one from the Biostatistics Department at UNC School of Public Health and one from Duke University Medical Center. I accepted the UNC position and launched my career as an academic biostatistician, a path consistent with Dr. Fryling's recommendation to me seven years earlier at Gettysburg.

5. Beginnings of the Women's Caucus

In the late 1960's in Chapel Hill I joined a women's liberation (WL) or consciousness raising group. For the very first time in my life, I realized that my personal experiences of sex discrimination in employment, education and civic life occurred within the larger context of how U.S. society and its legal systems were organized, particularly with respect to prescribed sex roles. Several WL group members belonged to a women's caucus in their own professional societies, e.g., sociology, history, and law. This is where I got the idea in late 1968 of having a women's caucus in my own discipline. Statistics was a male dominated field at the time, with the percentage of American Statistical Association (ASA) members who were female likely less than 10%.

In August 1969 I attended the Joint Statistical Meetings (JSM) in New York City. I was 30 years old, with only two years' experience as Assistant Professor at UNC. I posted handwritten flyers on the inside of the stall doors of the women's bathrooms in the meeting hotel, inviting interested women to meet in my hotel room to discuss possible formation of a women's caucus. Seven to ten women met over three evenings. We decided that a Women's Caucus was needed to address employment and educational discrimination against women in statistics.

I was reminded recently by Nancy Geller that a male attendee at the NYC JSM complained to the hotel about the posting of these flyers in the women's bathrooms and demanded that the hotel remove them. I don't know if the hotel followed through. I had assumed that the flyers likely would be removed each day by the janitorial staff, so I posted new flyers each morning during the meetings.

Following the NYC JSM Anita Bahn and I discussed with John Lehman, ASA executive director at the time, our interest in forming a Women's Caucus to be affiliated with ASA. Fortunately, he was very supportive. Anita was an epidemiologist, biostatistician,

physician, and textbook author who worked at MD state government, the federal government, and a few universities.

The next JSM, sixteen months later in Detroit in December of 1970, were joint with societies in economics and related fields. About 40 to 50 persons, primarily statisticians and economists, attended a scheduled meeting to discuss the organization, structure, vision and mission of a Women's Caucus.

Shortly thereafter, Anita and I consulted again with John Lehman regarding details of our caucus structure and desired affiliation with ASA. We decided to focus on ASA members and recommended that the American Economic Association form its own women's caucus. In May 1971 the ASA board of directors, all male at the time, recognized the Women's Caucus as an affiliated non-profit organization, including program participation in annual stat meetings, e.g., one invited paper session and space for a business meeting.

Note that in the late 1960's and the early 1970's we had no access to the following communication devices and tools that are now common: personal computers, word processing, copy machines, fax machines, e-mail, the internet, cell phones, smart phones, Zoom, the cloud and social media. Therefore, much discussion and planning regarding a caucus in these early days took place during the annual JSM's.

In archive materials for printed programs of JSM's that I accessed through ISU in preparation for this paper, I noted that our group was referred to as Women's Caucus during the 1970's. I don't know when the name was changed to Caucus for Women in Statistics (CWS), nor why, but I like the second name better. In the remainder of this paper, I refer to the caucus with its current name.

6. Early Years of Caucus for Women in Statistics

The CWS made its official debut at the August 1971 JSM in Fort Collins, CO. By chance my seatmate on my flight from Atlanta to Denver was John Lehman, providing further opportunity to discuss the caucus and its plans.

The CWS sponsored invited paper session at the 1971 meetings focused on equal opportunity for women in employment: the law and labor participation. Speakers were Sonia Pressman Fuentes, Elizabeth Waldman, and Marianne A. Ferber with Jane W. Lolb. Discussants were Jean D. Gibbons and Lawrence L. Kupper. There was a lively question and answer session among approximately 150 attendees.

Also, at the 1971 meetings the ASA Council established a President's Committee on Women in Statistics (COWIS), which had been proposed by CWS. In fact, seven of the eight named committee members had been recommended by CWS, and Jean Gibbons was the committee's first chair.

I viewed the ASA COWIS working from inside the ASA to address issues regarding women in statistics, whereas I viewed the CWS as being more of an activist or advocacy or rabble rouser type organization that was working on similar issues. I thought that both approaches were needed.

Finally, at the 1971 meetings, five CWS members were selected to serve on its Executive Committee: myself as president, Rita Zemach to chair a committee on further caucus structure and organization, Regina Loewenstein leading membership and newsletter production/distribution, Nancy Geller, and Mary Bowden. I was a biostatistician at Emory University School of Medicine in the Dept. of Statistics and Biometry. Rita Zemach was a biostatistician at Michigan State Department of Public Health. Regina Loewenstein was a biostatistician at Columbia University School of Public Health in New York City. Nancy Geller was a faculty member in the Statistics Department at University of Rochester, later in the decade focusing her professional interests in biostatistics. Mary Bowden was an economist in New York City at New York Life Insurance Company. It is interesting to note that several of the women who helped to organize CWS in its early days were biostatisticians and/or from New York State.

The Caucus continued during the 1970's to sponsor an invited paper session at the annual JSM. The 1972 JSM topic was "Use of Statistics in Measuring Equal Opportunity for Women and Minorities" with speakers Bill O. Wallace, George F. Travers, and Elizabeth Neville, with discussant Phyllis Wallace. The 1973 JSM topic discussed measurement of employment discrimination with speakers Joseph Gastwirth, Elizabeth Scott, and Valerie Oppenheim. The 1974 JSM topic was "Statistics on the Changing Status of Women", with speakers (a) Linda J. Waite, Larry E. Suter, and Richard L. Shortlidge, (b) June O'Neill, Barry Chiswick, James Sackler and Solomon Polachek, and (c) Dorothy M. Gilford, with discussant Joseph W. Duncan. The 1975 JSM topic was "Aspects of Women's Labor Market Experience" with speakers Herbert S. Parnes, Natalie Goodman, and Robert P. Quinn with Teresa E. Levitin.

I served as CWS president for three years, 1971 thru 1973. I declined to serve a fourth year and recommended that the nominating committee seek caucus president candidates from established and well-regarded women statisticians. I believed that this strategy would increase CWS visibility within ASA and the statistics discipline and, in addition, benefit the caucus with more experienced statisticians and leaders. In fact, the next four presidents after me in the 1970's were all ASA fellows. Only two of the 1970's presidents are still living: myself and Barbara Bailar.

The CWS newsletter made its debut in June, 1972, edited by Regina Loewenstein for a short time and then by Nancy Geller. It included ads for statistical positions since some employers were making efforts to recruit women and minorities to positions that historically had been reserved for white males. I served as newsletter editor for about four years in the 1970's after Regina and Nancy. My department at Emory partially subsidized the newsletter by providing support services, supplies and postage. We used a "state of the art" purple mimeo duplicating machine! Nancy's department earlier had also subsidized the newsletter.

Some CWS accomplishments later in the 1970's include adoption of our constitution in 1976 and our first open house at JSM in 1977.

7. Final Thoughts

I learned recently that 2021 is the 50th anniversary of the founding of Association for Women in Mathematics (AWM), spearheaded by Mary Gray. A joint celebration of the AWM and CWS 50th anniversaries is planned for later in 2021.

2021 is also the 50th anniversary celebration of another U.S. non-profit organization: National Public Radio (NPR). Every time I hear this anniversary announcement on NPR, I am reminded of our own CWS 50th anniversary. Journalism and statistics are two different disciplines, although with overlap since statistics can make contributions to many disciplines. However, the experiences of women breaking into the male dominated fields of journalism and statistics in the late 1960's and early 1970's are remarkably similar. I look forward to reading a recently published book about the four "founding mothers" of NPR: Susan Stamberg, Linda Wertheimer, Nina Totenberg, and Cokie Roberts. Interestingly, these four women and I were all born within the six-year period 1938-1944.

I'm very proud of the accomplishments of the hundreds of officers and perhaps thousands of members of CWS over fifty years of programs, activities, education, and activism. It is quite impressive.

Further, I'm amazed that CWS is still in existence and going strong after fifty years. When it was formed in 1971, I naively assumed that its life would be time limited. Surely, I thought, sex discrimination against women statisticians in education, employment, career development, mentoring, promotion, and recognition, and even in civic life, would disappear in the not-too-distant future. Fifty years later I can see that I was wrong. Although progress has been made to reduce sex discrimination in statistics, and more broadly in U.S. society, there is more work to be done. This ongoing work also needs to include efforts to maintain and not lose our gains to date.

On a personal note, I am pleased to be here fifty years later to celebrate. I look forward to a one year delayed in-person CWS 50th anniversary party next year at JSM in 2022 in Washington, D.C. I hope to see you all there.

8. References

Brogan, Donna (2014). "The Accidental Biostatistics Professor", invited chapter in Past, Present and Future of Statistical Science, edited by Xihong Lin, Christian Genest, David L. Banks, Geert Molenberghs, David W. Scott, and Jane-Ling Wang. A COPSS publication (Committee of Presidents of Statistical Societies). Chapman & Hall, CRC Press, New York. Entire book free online at:

<https://www.gwern.net/docs/statistics/2014-copss-pastpresentfuturestatistics.pdf>

Brogan, Donna (2017). "Challenging Sex Discrimination: Reflections over Seven Decades", Chance, 30(2), 4-18. Also published online on 04/27/2017 at <http://chance.amstat.org/2017/04/womenrise/>