Participation of Women in the Joint Statistical Meetings: 1996–2003

Beginning in 1996, the American Statistical Association's Committee on Women in Statistics (COWIS) has been tracking the participation of women at the Joint Statistical Meetings. This report is an update to include the 2003 meetings in San Francisco. Table 1 shows the various types of activities at the Joint Statistical Meetings.

The goal of this project is to obtain a better understanding of the participation of women at the JSM and to measure levels of active involvement in the many different roles that are available.

METHOD

Each year, the first step is to identify the women in the program. All participants are found in the index to the program book, which specifies the names of: presenters and co-authors of papers; session chairs; session organizers; discussants; lunch roundtable leaders; poster presenters; panelists. Over the years, different members of COWIS have made the counts of participants and performed the classification into men and women. For the years 2000 to 2002, the counts were made by the same member. When names were ambiguous, efforts were made to clarify, however, misclassifications are possible, and in 2003 approximately 10% of the participants were not classified (data are not available for the other years).

The data for the years 2000 to 2003 were based on the program book distributed at the joint meetings. Any last-minute withdrawals, cancellations or substitions are therefore not represented in the analysis. It is not known if the data for 1996 to 1999 were analyzed in the same fashion.

Following the identification of participants, a count of all distinct participants in the program book is made ("unduplicated count"). Since the program book lists an individual each time he or she participates in any way, a "duplicated count" is also made (for instance, individual A who acts as a session chair in one session and a presenter in another, will be counted twice in the "duplicated count" but only once in the "unduplicated").

FINDINGS

The number of participants was decreasing in the early years of the survey, as can be seen in Table 2. From 1999 on, there was a fair amount of variability, with peaks in 1999 (Baltimore), 2002 (New York) and a big increase last year (San Francisco). Table 2 gives both duplicated and unduplicated counts; the proportions differ by at most 1 percentage point.

As seen in Table 3, women are active in all of the various roles, from session organizers to roundtable hosts, to presenters of invited papers. The figures fluctuate quite a bit from year to year, with most falling in the range 20% to 30%.

Figures 1 through 3 present the data from Tables 2 and 3 in graphical form. As is evident from inspection of the Figures, in general the most "popular" roles for women are as poster presenters and hosts of roundtable lunches. Women are, in general, least likely to participate in the joint meetings as invited speakers.

DISCUSSION

Overall, about 25% of the participants in the recent Joint Statistical Meetings have

Type	1996	1997	1998	1999	2000	2001	2002	2003
Invited Sessions	121	110	121	133	103	133	104	126
Contributed Sessions	202	191	146	199	158	180	232	287
Poster Presentations	127	183	88	153	86	90	92	158
Lunch Roundtables	63	66	74	78	76	95	40	77
Other (Speaker Lunches, etc.)	43	53	10	5	24	7	9	11

Table 1: **Sessions/Presentations at the 1996–2003 JSM. Exclusions are: all special lectures (such as COPSS Fisher lecture), continuing education, ASA film theatre. Contributed sessions include Special Contributed and Topic Contributed sessions.**

	1996 Chicago	1997 Anaheim	1998 Dallas	1999 Baltimore	2000 Indianapolis	2001 Atlanta	2002 New York	2003 San Francisco
Women	535 (19%)	505 (19%)	416 (18%)	746 (24%)	612 (26%)	685 (26%)	787 (25%)	1003 (29%)
	648 (18%)	601 (18%)	479 (18%)	878 (24%)	714 (25%)	887 (25%)	1020 (24%)	1237 28%)
Men	2346 (81%)	2201 (81%)	1858 (82%)	2319 (76%)	1732 (74%)	1990 (74%)	2332 (75%)	2474 (71%)
	2868 (82%)	2753 (82%)	2207 (82%)	2814 (76%)	2188 (75%)	2667 (75%)	3191 (76%)	3239 72%)
Total	2881	2706	2274	3065	2344	2675	3119	3477
	3516	3354	2686	3692	2902	3554	4211	4931

Table 2: **Unduplicated (first row) and duplicated (second row) counts of participation by year.**

been women. In the early years of the survey, the proportion of women participants was closer to 20%, so there is an increasing trend. However, as noted in the previous report, it is not clear how this trend in participation correlates (if at all) with changes in the membership of ASA as a whole. As is evident from the accumulated data, the participation of women is not evenly spread across the different possible activities. Roughly 80% of invited speakers are men, consistently over the years. By contrast, from 1998 on, approximately 70% of poster presenters are men. Participation of women in JSM activities varies greatly according to the activity in question.

Type		1996	1997	1998	1999	2000	2001	2002	2003
Chair									
	Women	19	25	24	26	23	32	24	31
	Men	81	75	76	74	77	68	76	69
Organizer									
	Women	26	25	24	22	26	23	23	32
	Men	74	75	76	78	74	77	77	68
Invited Paper									
	Women	18	17	20	18	20	24	20	23
	Men	82	83	80	82	80	76	80	77
Discussant									
	Women	23	19	20	19	24	29	20	18
	Men	77	81	80	81	76	71	80	82
Presenter									
	Women	19	19	25	23	23	24	25	28
	Men	81	81	75	77	77	76	75	72
Poster									
	Women	25	21	36	28	32	30	32	32
	Men	75	79	64	72	68	70	68	68
Roundtable									
	Women	30	17	35	27	31	27	30	19
	Men	70	83	65	73	69	73	70	81

Table 3: **Percentage of women participants in selected roles at JSM, 1996–2003.**

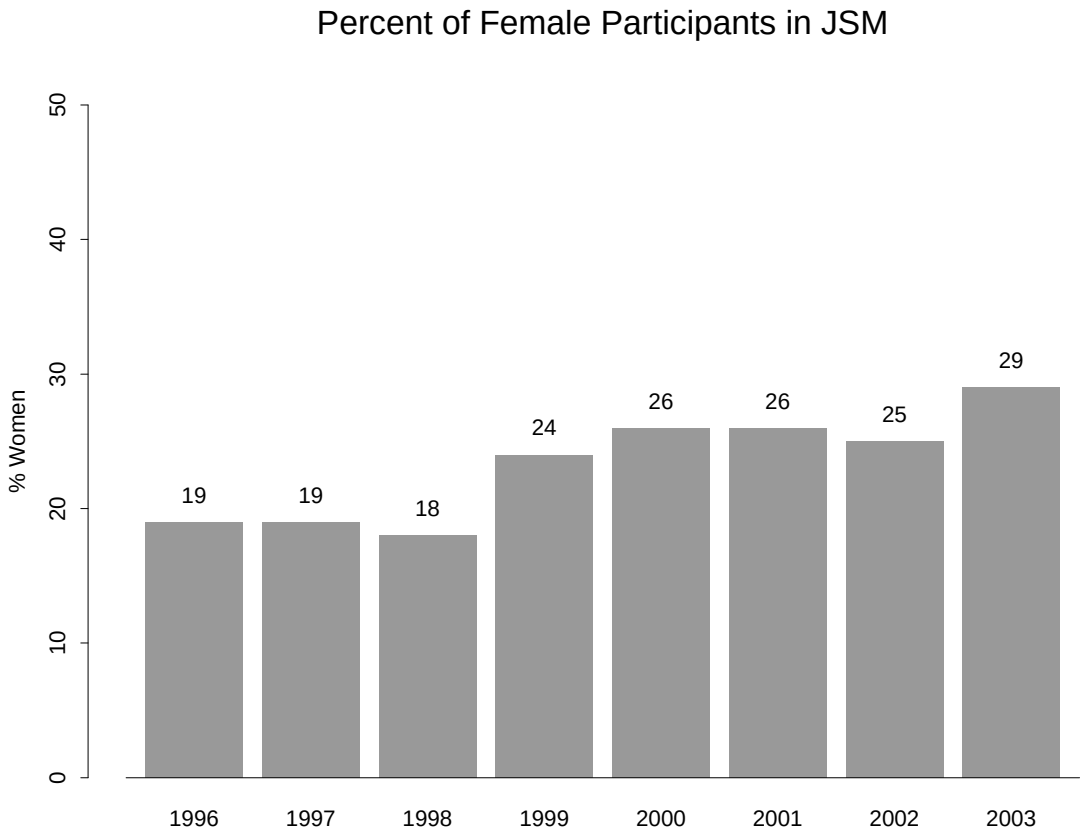

Figure 1: **Percentage of women participants in JSM, overall, 1996–2003.**

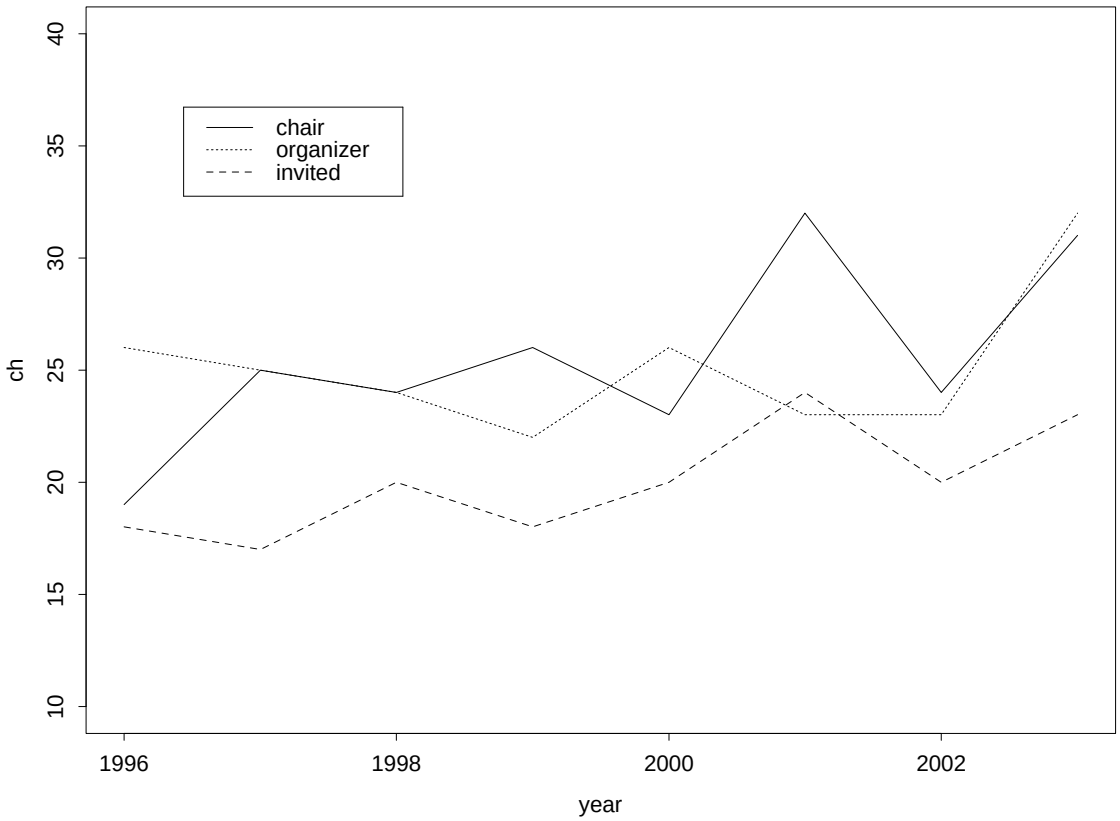

Figure 2: **Percentage of women participating in JSM as Chair, Organizer or Invited Speaker, 1996–2003.**

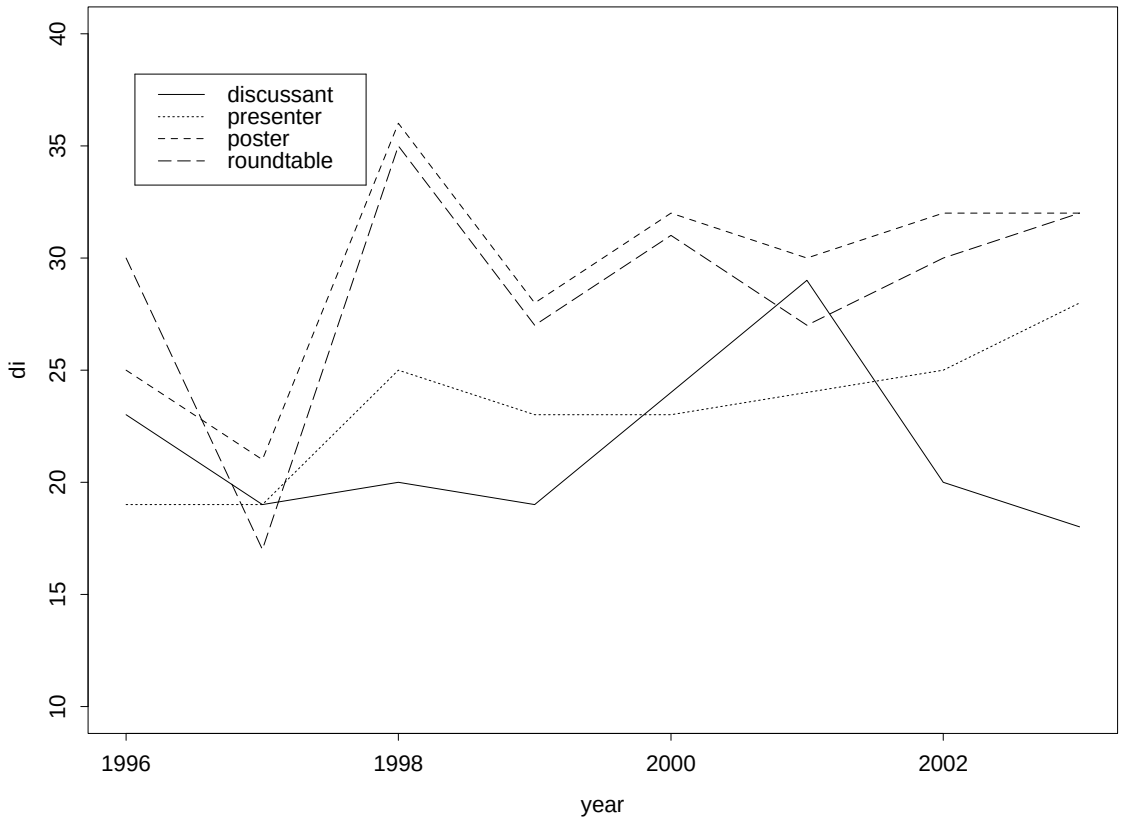

Figure 3: **Percentage of women participating in JSM as Discussant, Presenter, Poster Presenter or Roundtable Host, 1996–2003.**