Chapter 3
Faculty

Data Highlights

The number of full-time mathematics faculty declined by 1163 over 1990 levels, a 6% decline. However, the number of tenured faculty increased slightly. Because tenure-eligible and other full-time faculty were aggregated in the 1990 CBMS survey, it is not possible to discern how the decline is distributed between tenure-eligible and other full-time positions. The largest decline occurred in the BA departments of mathematics, where there were 705 fewer tenure-eligible and other full-time faculty than were reported in 1990. The number of tenured faculty increased by 40 at these departments.

The number of faculty in statistics departments, mostly PhD departments, increased substantially over 1990 levels. However, the number of statistics departments included in the population for the 1995 CBMS survey was significantly larger than for the 1990 CBMS survey, which might account for some of the increase. However, there is no doubt that statistics enrollment, and faculty, have enjoyed a nice increase over the last five years.

Both Tables F.2 and F.3 contain relevant data from the 1990 CBMS survey. For mathematics departments, the percentage of women among tenured faculty is smallest for PhD departments, just over 7%, and highest at BA departments, just over 20%, with MA departments in the middle with nearly 16% tenured women faculty. The corresponding percentages of women among tenure-eligible faculty is: PhD departments 20%, BA departments 43%, and MA departments 29%.

There is little difference among the average ages of faculty in the three types of mathematics departments, each hovering around 49 years. The statistics department faculty have about the same average age as well.

Minority representation among mathematics faculty is low, except for Asian/Pacific islanders. White, non-Hispanic faculty comprise between 82% and 93% of mathematics faculty at each of the three types of departments. Statistics faculty at PhD departments are 75% white, non-Hispanic, 18% Asian/Pacific islanders, and 6% Mexican-American, Puerto Rican, and other Hispanics.

Explanation of the Tables

This chapter contains eight tables presenting data on four-year college and university faculty in mathematics and statistics departments, broken down by type of department.

Respondents to this CBMS survey were asked to partition their faculty into four non-overlapping groups: tenured, tenure-eligible, other full-time, and part-time. An instructor was part-time or full-time according to his or her budget designation within the department only, notwithstanding any other institutional position. The group "other full-time" includes all those full-time faculty not specifically tenured or tenure-eligible, i.e., on the tenure track. It includes, then, such appointments as continuing instructor, one-semester full-time appointment, and any postdoctoral position.

The number and percentage of women among the various classifications of faculty and among the ethnic and age categories are mostly new with this survey. Thus, there are not many historical comparisons available. As in previous chapters, if a table primarily presents percentages the 100% number is given and it is accompanied by the 100% symbol.

Tables F.1-F.3

These tables are an elaboration of Tables SF.6, SF.7, and SF.8 in chapter 1, *Summary*.

While the total full-time mathematics faculty decreased by 6% from 1990 levels, this table gives an indication that this decrease is mostly in other than tenured/tenure-eligible faculty. In 1990, the number of tenured mathematics faculty was 12,688, as compared to the 1995 number of 12,779. While previous CBMS surveys did not count the number of tenure-eligible faculty, the 1995 figure of 3329 tenure-eligible faculty is 26% of the tenured faculty, which seems a reasonable percentage. It is probable, then, that the decrease in full-time faculty is mostly in the "other full-time" category, which includes postdoctoral appointments, full-time visitors, full-time non-tenure eligible faculty, etc.
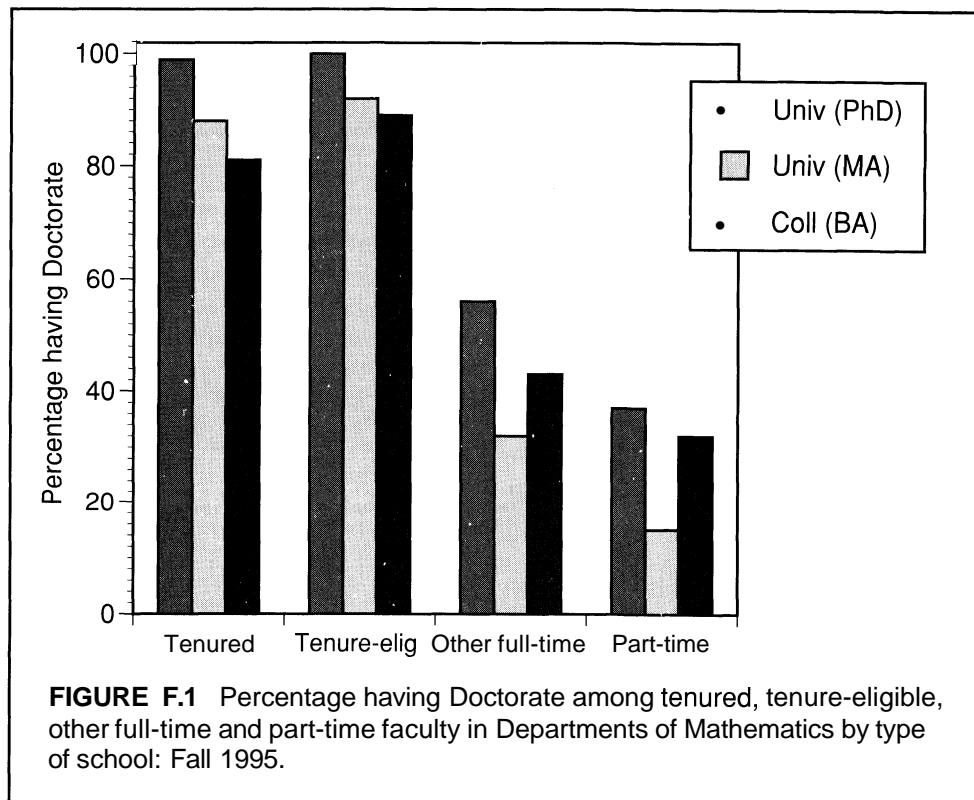
As mentioned previously, the 1990 CBMS surveys did not separate full-time faculty into the three groups, tenured, tenure-eligible, and other full-time, as does this survey. This report makes comparisons with the 1990 CBMS survey where possible.

Previous CBMS reports contain data on the percentage of women faculty. Surveys prior to 1990 did not divide the departments by highest mathematics degree, which makes detailed comparisons with the 1995 survey not possible. However, overall comparisons are still possible. The 1985 survey reported that women were 14% of the full-time mathematics department faculty and 10% of the statistics department faculty. The 1980 CBMS survey reported that 14% of the mathematical sciences faculty were women, up from 10%, as reported in the 1975 CBMS survey. However, in both of these latter two surveys the mathematical sciences faculty was the aggregate mathematics, statistics, and computer science faculty, and neither survey reported data for the separate discipline faculty.

The number of statistics department faculty for Fall 1995 is considerably higher than the 1990 figure, but, again, the list of statistics departments was improved over previous CBMS surveys, so it is difficult to assess the increased statistics numbers.

The number of tenured/tenure-eligible mathematics faculty on leave for Fall 1995 is 474 (9% of the tenured/tenure-eligible faculty) for PhD departments, 210 (5%) for MA departments, and 454 (7%) for BA departments. For PhD statistics departments the number is 45 (5%). These data are from the 1995 CBMS survey and do not appear in any of the tables.

FIGURE F.1 Percentage having Doctorate among tenured, tenure-eligible, other full-time and part-time faculty in Departments of Mathematics by type of school: Fall 1995.

TABLE F.1 Number of tenured, tenure-eligible, other full-time and part-time faculty in Departments of Mathematics and Departments of Statistics by highest degree and type of school: Fall 1995. (Number of women in parentheses)
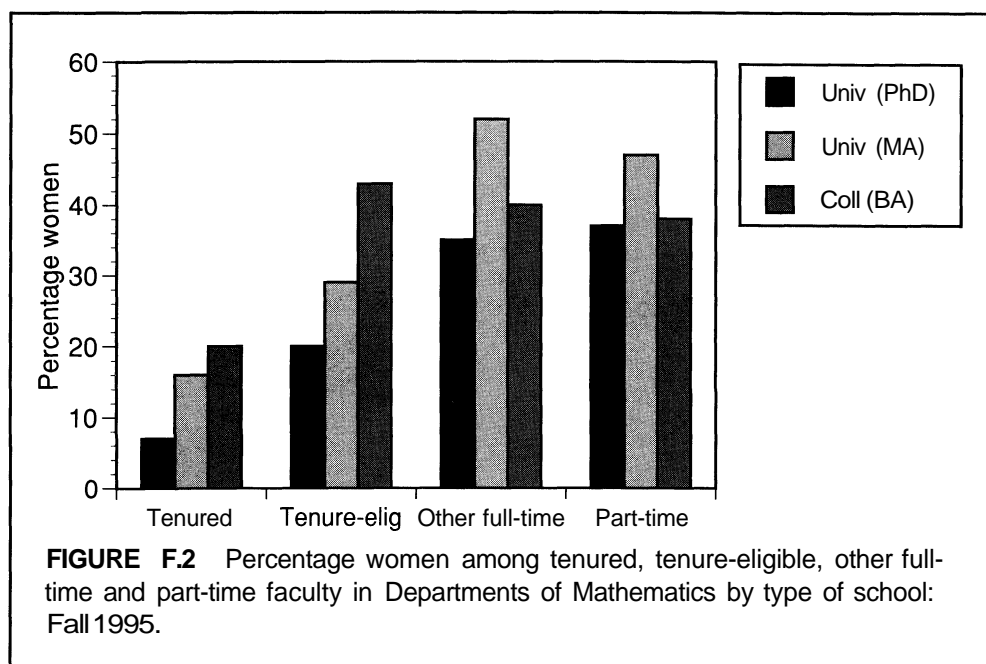
	Univ (PhD)				Univ (MA)				College (BA)				
	Tenured	Tenure-eligible	Other full-time	Part-time	Tenured	Tenure-eligible	Other full-time	Part-time	Tenured	Tenure-eligible	Other full-time	Part-time	Total
Math Depts													
Doctoral degree	4637 (317)	770 (158)	423 (66)	396 (91)	2821 (397)	750 (199)	235 (60)	222 (56)	3961 (539)	1552 (651)	279 (48)	873 (134)	16919 (2716)
Without doctoral degree	54 (18)	2 (0)	335 (201)	669 (301)	399 (104)	62 (36)	498 (321)	1234 (634)	907 (455)	193 (97)	370 (213)	1895 (913)	6618 (3293)
Total Math Depts	4691 (335)	772 (158)	758 (267)	1065 (392)	3220 (501)	812 (235)	733 (381)	1456 (690)	4868 (994)	1745 (748)	649 (261)	2768 (1047)	23537 (6009)
Stat Depts													
Doctoral degree	647 (32)	171 (36)	33 (8)	90 (16)	7 9 (8)	2 0 (2)	3 (2)	6 (2)					1049 (106)
Without doctoral degree	2 ·(0)	0 (0)	23 (17)	32 (9)	2 (0)	0 (0)	8 (2)	8 (3)					75 (31)
Total Stat Depts	649 (32)	171 (36)	56 (25)	122 (25)	81 (8)	20 (2)	11 (4)	14 (5)					1124 (137)

TABLE F.2 Number of tenured, tenure-eligible, other full-time and part-time faculty in Departments of Mathematics by gender and type of school: Fall 1995. Also some 1990 data.

	Univ (PhD)				Univ (MA)				College (BA)				Totals				Total
	Ten-ured	Ten-ure elig	Other full-time	Part-time	Ten-ured	Ten-ure elig	Other full-time	Part-time	Ten-ured	Ten-ure elig	Other full-time	Part-time	Ten-ured	Ten-ure elig	Other full-time	Part-time	
Men	4356	614	491	673	2719	577	352	766	3874	997	388	1721	10949	2188	1231	3160	17528
Women	335	158	267	392	501	235	381	690	994	748	261	1047	1830	1141	909	2129	6009
Total 1995	4691	772	758	1065	3220	812	733	1456	4868	1745	649	2768	12779	3329	2140	5289	23537
Total 1990	4781	1646*		1129	3079	1979*		2052	4828	3098*		3605	12688	6723*		6786	26197
Women 1990	662**			na	1148**			na	2045**			na	3855**			na	

* This number is the total of tenure-eligible and other full-time.

** This number is the total of tenured, tenure-eligible and other full-time.

FIGURE F.2 Percentage women among tenured, tenure-eligible, other full-time and part-time faculty in Departments of Mathematics by type of school: Fall 1995.
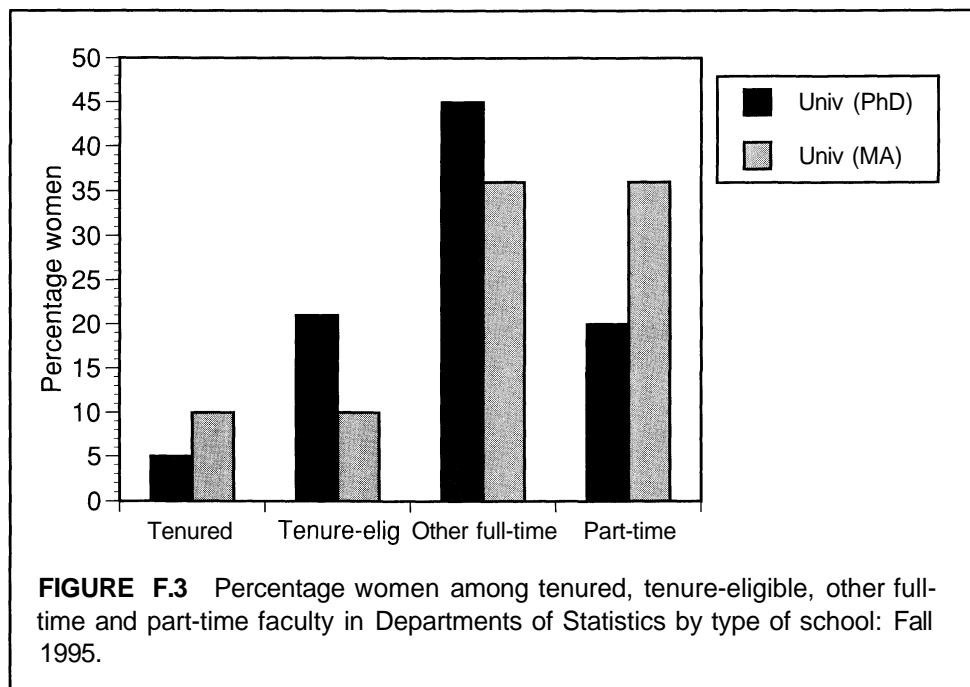
TABLE F.3 Number of tenured, tenure-eligible, other full-time and part-time faculty in Departments of Statistics by gender and type of school: Fall 1995. Also some 1990 data.

	Univ (PhD)				Univ (MA)				Totals				Total
	Ten-ured	Tenure-eligible	Other full-time	Part-time	Ten-ured	Tenure-eligible	Other full-time	Part-time	Ten-ured	Tenure-eligible	Other full-time	Part-time	
Men	617	135	31	97	7 3	1 8	7	9	690	153	38	106	987
Women	32	36	25	25	8	2	4	5	40	38	29	30	137
Total 1995	649	171	56	122	81	20	11	14	730	191	67	136	1124
Total 1990	484	184*		67	40	13*		23	524	197*		90	811
Women 1990		91**		na		12**		na		103**		na	

* This number is the total of tenure-eligible and other full-time.

** This number is the total of tenured, tenure-eligible and other full-time.

FIGURE F.3 Percentage women among tenured, tenure-eligible, other full-time and part-time faculty in Departments of Statistics by type of school: Fall 1995.

Tables F.4 and F.5

These tables are an elaboration of tables SF.9 and SF.10 in chapter 1, *Summary*.

Within each of the three types of mathematics departments (PhD, MA, and BA) used to present data, the individual percentages—and the "total" row percentages—total 100%, except for rounding errors. For example, in PhD mathematics departments Table F.4 shows that 3% of the tenured male faculty are between the ages of 31 and 35 inclusive. This is 3% of the total PhD department mathematics faculty of 5463, or 164 such faculty.
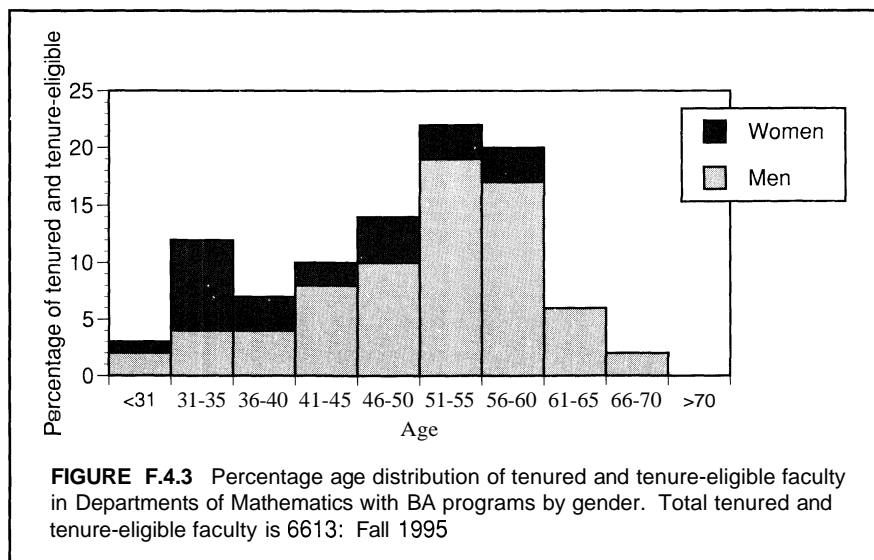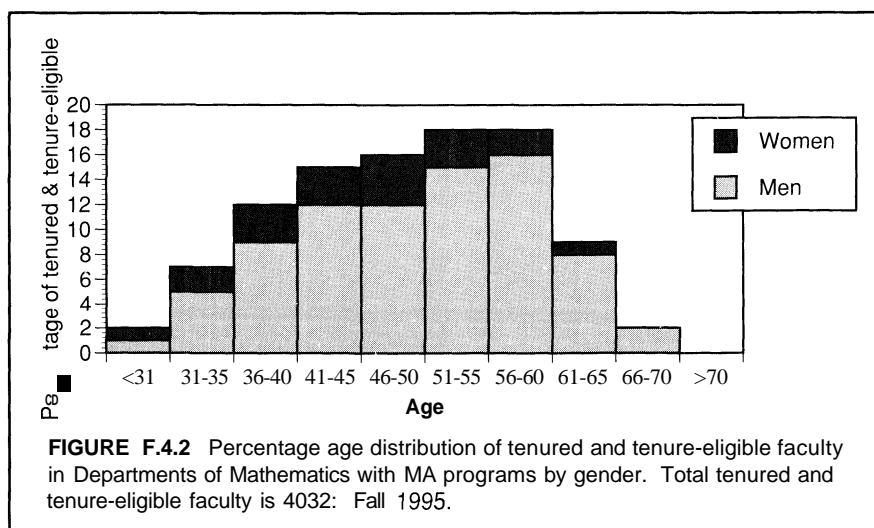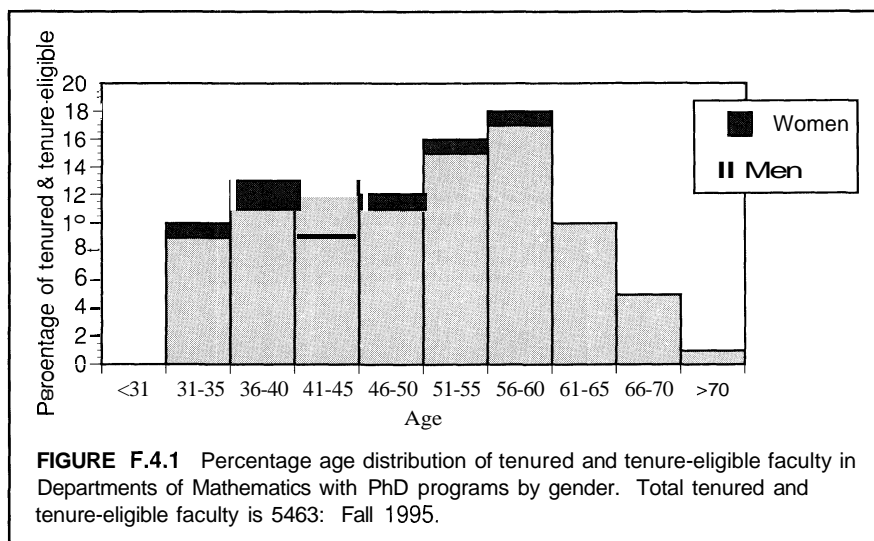
These two tables cannot be directly compared to previous CBMS age data because of a change in faculty categories used in this survey. Previously, tenured, tenure-eligible, and other full-time faculty were collectively reported as a single group for the age data. For this survey only tenured and tenure-eligible were included in this age data. Thus, the overall median age of 50 for mathematics faculty in Fall 1995 compares to the median age of 46 for the full-time mathematics faculty reported in the 1990 CBMS survey. It is hoped that this new age data will give a more accurate picture of the need for new faculty over the next decade as the average age of tenured faculty increases.

TABLE F.4 Percentage age distribution of tenured and tenure-eligible faculty in Departments of Mathematics by type of school and gender: Fall 1995.

	Percentage of faculty										Total tenured/ tenure-eligible faculty	Average age
	<31	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	>70		
Univ(PhD)												
Tenured men	0	3	8	11	11	15	17	10	5	1		52.1
Tenured women	0	0	1	1	1	1	1	0	0	0	100%	48.0
Tenure-eligible men	0	6	3	1	0	0	0	0	0	0	5463*	35.5
Tenure-eligible women	0	1	1	0	0	0	0	0	0	0		35.5
Total Univ(PhD)	1	10	13	13	13	16	18	10	5	1	100% 5463	49.7
Univ (MA)												
Tenured men	0	1	5	9	11	14	16	8	2	0		52.2
Tenured women	0	0	1	2	3	3	2	1	0	0	100%	50.5
Tenure-eligible men	1	4	4	3	1	1	0	0	0	0	4032*	38.8
Tenure-eligible women	1	2	2	1	1	0	0	0	0	0		37.4
Total Univ(MA)	2	7	12	15	16	18	18	9	2	0	100% 4032	49.1
Coll(BA)												
Tenured men	0	1	2	6	8	17	17	6	2	0		53.4
Tenured women	0	1	2	2	4	1	3	0	0	0	100%	47.2
Tenure-eligible men	2	3	2	2	2	2	0	0	0	0	6613*	40.1
Tenure-eligible women	1	7	1	0	0	2	0	0	0	0		36.7
Total Coll(BA)	4	12	7	10	15	23	21	6	2	0	100% 6613	48.8

0 means less than half of 1%.

* Total for all 4 rows in this block.

FIGURE F.4.1 Percentage age distribution of tenured and tenure-eligible faculty in Departments of Mathematics with PhD programs by gender. Total tenured and tenure-eligible faculty is 5463: Fall 1995.

FIGURE F.4.2 Percentage age distribution of tenured and tenure-eligible faculty in Departments of Mathematics with MA programs by gender. Total tenured and tenure-eligible faculty is 4032: Fall 1995.

FIGURE F.4.3 Percentage age distribution of tenured and tenure-eligible faculty in Departments of Mathematics with BA programs by gender. Total tenured and tenure-eligible faculty is 6613: Fall 1995
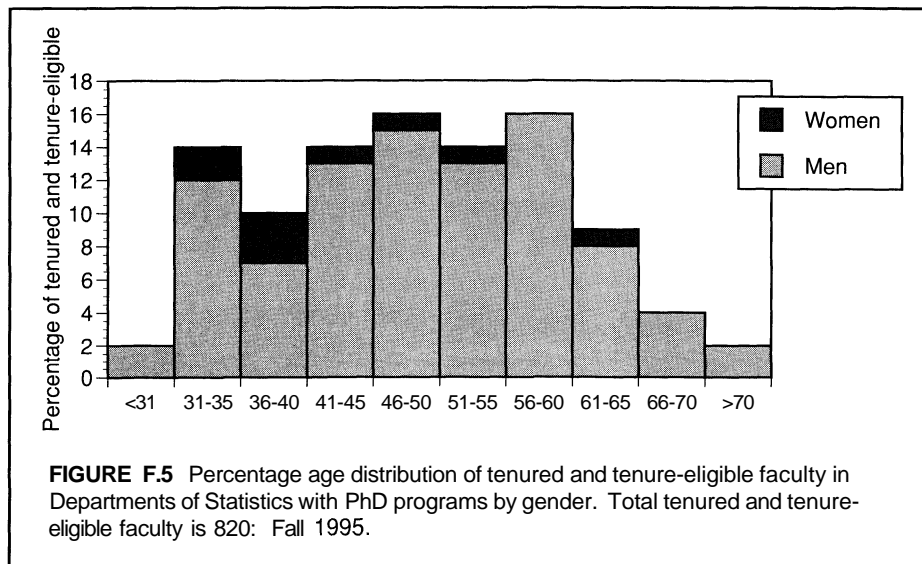
TABLE F.5 Percentage age distribution of tenured and tenure-eligible faculty in Departments of Statistics by type of school and gender: Fall 1995.

	Percentage of faculty										Total tenured/ tenure-eligible faculty	Average age
	<31	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	>70		
Univ(PhD)												
Tenured men	0	3	5	1 1	1 4	1 3	1 6	8	4	2		52.3
Tenured women	0	0	1	1	1	1	0	1	0	0	100%	49.0
Tenure-eligible men	2	9	2	2	1	O	O	O	O	O	820*	35.3
Tenure-eligible women	0	2	2	0	0	0	0	0	0	0		35.5
Total Univ(PhD)	2	14	11	14	16	13	16	8	4	2	100% 820	48.5
Univ (MA)												
Tenured men	0	0	8	(1)	8	32	11	18	0	0		53.6
Tenured women	0	0	(1)	(1)	(1)	0	0	0	0	0	100%	43.0
Tenure-eligible men	0 5		(1)	5	O	O	O	O	O	O	101*	38.0
Tenure-eligible women	0	0	0	0	0	0	0	0	0	0		-
Total Unlv(MA)	0	5	13	11	11	32	11	18	0	0	100% 101	50.8

0 means less than half of 1%.

* Total for all 4 rows in this block.

(1) Too few sample cases for a reliable estimate.

FIGURE F.5 Percentage age distribution of tenured and tenure-eligible faculty in Departments of Statistics with PhD programs by gender. Total tenured and tenure-eligible faculty is 820: Fall 1995.

Tables F.6 and F.7

These tables are an elaboration of Tables SF.11 and SF.12 in chapter 1, *Summary*.

The percentage of women in PhD mathematics departments continues to be less than the percentages in the other two types of mathematics departments. Tenured and tenure-eligible women are 7% of the full-time faculty in PhD mathematics departments as com-pared to 15% for MA mathematics departments and 21% for BA mathematics departments.

For PhD statistics departments the number of Asian/Pacific Islanders is 18%, with white, non-Hispanic accounting for 73% of full-time faculty. For these same departments tenured and tenure-eligible women are 9% of the full-time faculty.

TABLE F.6 Percentage of gender and of racial/ethnic groups among tenured, tenure-eligible, and other full-time faculty in Departments of Mathematics by type of school: Fall 1995.

	Percentage of faculty						Number of
	American Indian/ Alaskan	Asian/ Pacific Islander	Black, not Hispanic	Mexican American, Puerto Rican, other Hispanic	White, not Hispanic	Not known	tenured/ tenure-eligible and other full-time faculty
Univ(PhD)							
Tenured men	0	7	1	1	61	1	
Tenured women	0	1	0	0	4	0	
Tenure-eligible men	0	3	0	0	6	0	100%
Tenure-eligible women	0	0	0	0	2	0	6221*
Other full-time men	0	1	0	0	6	0	
Other full-time women	0	1	0	0	4	0	
Total full-time men	0	11	1	2	73	1	100%
Total full-time women	0	1	0	0	10	0	**6221****
Univ(MA)							
Tenured men	0	6	1	1	48	1	
Tenured women	0	1	0	0	9	0	
Tenure-eligible men	0	3	1	1	9	0	100%
Tenure-eligible women	0	1	0	0	4	0	4765*
Other full-time men	0	0	1	0	6	0	
Other full-time women	0	0	1	0	7	0	
Total full-time men	0	9	2	1	62	2	100%
Total full-time women	0	2	1	0	20	1	**4765****
Coll(BA)							
Tenured men	0	1	0	0	52	1	
Tenured women	0	0	2	0	12	0	
Tenure-eligible men	0	1	0	0	14	0	100%
Tenure-eligible women	0	0	0	0	7	0	7262*
Other full-time men	0	0	0	0	5	0	
Other full-time women	0	0	0	0	3	0	
Total full-time men	0	3	1	0	70	1	100%
Total full-time women	0	1	2	0	23	1	**7262****

0 means less than half of 1%.

* Total for all 6 rows in this block.

** Total for both rows in this block.

TABLE F.7 Percentage of gender and of racial/ethnic groups among tenured, tenure-eligible, and other full-time faculty in Departments of Statistics by type of school: Fall 1995.

	Percentage of faculty						Number of tenured/ tenure-eligible and other full-time faculty
	American Indian/ Alaskan	Asian/ Pacific Islander	Black, not Hispanic	Mexican American, Puerto Rican, other Hispanic	White, not Hispanic	Not known	
Univ(PhD)							
Tenured men	0	12	0	3	55	0	
Tenured women	0	0	0	1	3	0	
Tenure-eligible men	0	3	1	1	11	0	100%
Tenure-eligible women	0	1	0	0	4	0	876*
Other full-time men	0	1	0	0	2	0	
Other full-time women	0	1	0	0	1	0	
Total full-time men	0	16	1	5	67	0	100%
Total full-time women	0	2	0	1	8	0	**876****
Univ(MA)							
Tenured men	0	13	0	(1)	58	(1)	
Tenured women	0	0	0	0	10	0	
Tenure-eligible men	0	8	(1)	0	0	0	100%
Tenure-eligible women	0	0	0	0	0	0	112*
Other full-time men	0	0	0	0	(1)	0	
Other full-time women	0	0	0	0	(1)	0	
Total full-time men	0	20	(1)	(1)	60	(1)	100%
Total full-time women	0	0	0	0	13	0	**112****

0 means less than half of 1%.

(1) Too few sample cases for a reliable estimate.

* Total for all 6 rows in this block.

** Total for both rows in this block.

Table F.8

This table is an elaboration of Tables SF.13 and SF.14 in chapter 1, *Summary*.

The percentages within each of the large boxes total 100%, except for possible rounding errors. These data were not collected in previous CBMS surveys.

TABLE F.8 Percentage of gender and of racial/ethnic groups among part-time faculty in Departments of Mathematics and in Departments of Statistics by type of school: Fall 1995.

	Percentage of part-time faculty						Number of part-time faculty
	American Indian/ Alaskan	Asian/ Pacific Islander	Black, not Hispanic	Mexican American, Puerto Rican, other Hispanic	White, not Hispanic	Not known	
Math Depts							
Univ(PhD)							
Part-time men	0	5	0	1	42	12	100%
Part-time women	0	4	0	0	29	5	1065*
Univ(MA)							
Part-time men	0	3	3	1	47	1	100%
Part-time women	1	3	2	0	36	2	1456*
Coll(BA)							
Part-time men	0	1	1	1	58	2	100%
Part-time women	0	1	1	1	33	2	2768*
Total part-time men	0	2	2	1	51	4	100%
Total part-time women	0	2	1	1	33	3	5289*
Stat Depts							
Univ(PhD)							
Part-time men	0	19	9	(1)	52	0	100%
Part-time women	0	(1)	0	(1)	16	0	122*
Univ(MA)							100%
Part-time men	Too few sample cases for reliable estimates						
Part-time women							**14***
Total part-time men	0	19	7	(1)	51	0	100%
Total part-time women	0	(1)	0	(1)	18	0	136*

0 means less than half of 1%.

* Total for both rows in this block.

(1) Too few sample cases for a reliable estimate.