

Women and the RAE

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Although RAE 2001 was the third such exercise it was the first time the gender of selected staff was noted. This provides us with some interesting statistics which comment on the gender equality of the UK mathematical community.

The Units of Assessment considered are:

22 - Pure Mathematics

23 - Applied Mathematics

24 - Statistics and Operational Research

25 - Computer Science.

We are indebted to Richard Puttock of HEFCE for providing us with the statistics. The figures are for category A, A* and C staff submitted for assessment, i.e. only those eligible to include outputs in the assessment.

Female Participation

UoA	22	23	24	25	22-24	22-25
Female % of Selected Staff	7	10	16	13	10	12

Table 1: Gender distribution of selected staff.

First to note is the low percentage of women being submitted to the RAE. However, does this just reflect the UK mathematical community? We can compare the statistics with HESA's figures for mathematical academic positions held in 2000/2001 in the UK. Of the 3208 mathematical positions held in the UK (this includes permanent and fixed term positions but excludes hourly paid/casual staff) 518 positions were held by women, which represents approximately 16% of the total. This implies that female mathematicians are under represented in the RAE.

Contracts

On Fixed Term Contract	22	23	24	25	22-25
% of Female Staff	47	27	20	14	21
% of Male Staff	15	13	13	11	13

Table 2: Gender and fixed term contract distribution of selected staff.

We note that the percentage of staff on fixed term contracts is higher for women in every UoA.

Age Distribution

Age	20-29	30-39	40-49	50-59	60+
% of Female Staff	6	50	19	19	6
% of Male Staff	6	25	24	28	17

Table 3(a): Age distribution of selected staff in UoA 22.

Age	20-29	30-39	40-49	50-59	60+
% of Female Staff	12	51	21	14	3
% of Male Staff	3	33	26	23	16

Table 3(b): Age distribution of selected staff in UoA 23.

Age	20-29	30-39	40-49	50-59	60+
% of Female Staff	6	55	18	20	2
% of Male Staff	2	29	27	32	9

Table 3(c): Age distribution of selected staff in UoA 24.

Age	20-29	30-39	40-49	50-59	60+
% of Female Staff	3	41	38	16	2
% of Male Staff	3	34	34	23	6

Table 3(d): Age distribution of selected staff in UoA 25.

Age	20-29	30-39	40-49	50-59	60+
% of Female Staff	6	46	30	16	2
% of Male Staff	4	32	29	25	10

Table 3(e): Age distribution of selected staff in UoAs 22-25.

Apart from UoA 25 (where the figure is 44%) every other UoA shows that over 50% of the female mathematicians submitted were under 40 years of age. The age profile for the male mathematicians is much more evenly distributed.

Ratings

Rating of Department	1	2	3a	3b	4	5	5*
% of Female Staff	0	2	16	5	25	32	20
% of Male Staff	0	1	11	4	26	39	20

Table 4: Gender and rating distribution of selected staff in UoA 22-25.

It appears that the male and female researchers selected are distributed similarly between the differently rated departments. This also holds when individual UoAs are considered.

Comment

As Table 2 illustrates many of the female mathematicians being submitted to the RAE are not on permanent contracts. This leads us to ask a couple of questions: Are women with permanent positions being submitted to the RAE? What happens to the women on temporary contracts?

We begin by analysing further statistics relating to the first question. HESA's figures tell us that 278 women held permanent mathematical academic positions in the UK in 2000/2001. This represents 13% of the total 2154 positions available. If we now consider the RAE statistics we see that of the 180 female researchers submitted to the RAE for UoAs 22-24 this includes 51 on temporary contracts. Corresponding results for male researchers show that 1563 male researchers were submitted of which 216 were on temporary contracts. Thus less than 50% (129/278) of women in permanent positions were submitted to the RAE in comparison with over 70% (1347/1876) of men in permanent positions.

That less than 50% of women in permanent positions are being submitted to the RAE needs consideration. We should note that the RAE assesses research and that is only one part of the varied work of an academic. Do the statistics reflect that female academics tend to become overburdened with other duties such as administration and teaching? Even if this isn't intentional, that women are in general more conscientious about their teaching than their male counterparts is commonly acknowledged and can be harmful to women's research output. Also the desire to have women on committees can mean that the few women in maths departments can end up with more than their fair share of administrative duties. Even if a mathematician is not producing as much research as another, in terms of numbers of papers, is it right that they should be excluded from the RAE? That departments seem to insist on mathematicians submitting 4 papers or nothing means that good mathematics is being excluded from the RAE.

Tables 3(a)-(e) offer us insight into the second question. Certainly the women being submitted to the RAE are younger than the men and consequently more likely to be on temporary contracts. This could be viewed positively - it is the beginning of a trend and soon many more women will be in academic posts and being submitted to the RAE. However, we are hesitant about this interpretation. We suggest that a large number of women are dropping out of the 'academic race' between the ages of 30-40. This has now become the age in which to secure a permanent position, however for many women it is also the time to have children.

Finally we look again at Table 1 and note the discrepancies between different UoAs of the inclusion of female staff. Do these differences indicate that women prefer certain types of mathematics to others, i.e. statistics as opposed to pure mathematics, or is it a comment on the culture of different mathematical communities, some cultures being more female-friendly than others?