In last month’s column, I described the loss of tenure positions and their replacement with other full-time faculty appointments. This month, I will focus on how this has affected women earning PhDs in the mathematical sciences, also drawing on the Annual Survey of new PhDs, made available through AMS.

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This is particularly noticeable in PhD-granting mathematics departments, where a woman employed full-time is far less likely than a man to be in a tenure or tenure-eligible position (Figures 2 & 3). In 2015, 80% of the men employed full-time in a PhD-granting department were in tenure or tenure-eligible positions, this fraction having dropped from 91% in 1995. For women, the percentage fell from 65% in 2015 to 44% in 2015.
Despite the appearance that women are making substantial gains in tenure and tenure-eligible positions in PhD-granting departments, the fact is that they have only grown from 9% of those faculty in 1995 to 16% in 2015. In comparison, in Masters-granting departments the percentage of women in tenure and tenure-eligible positions rose from 18% in 1995 to 29% in 2015. At undergraduate colleges, it rose from 26% in 1995 to 32% in 2015. Over the same two decades, women rose from 22% of the PhDs awarded by mathematics departments to 26%.

If we look at all PhDs awarded to women in the mathematical sciences, now including departments of statistics or applied mathematics, the situation looks better, rising to 31% in 2015 (Figure 4), with women earning 33% of the PhDs in applied mathematics and 46% of those degrees in statistics.

CBMS does not collect the data that would enable us to make comparable statements about the type of employment gained by mathematicians from other underrepresented groups and the numbers are so small it is not clear how meaningful they would be, but it does appear that efforts to broaden the diversity of mathematics departments is being stymied by the trend to replace tenure-line positions with contract.
positions. At least for women, their expanding representation in mathematics faculty is happening primarily in those contract positions.