

Could motherhood be the reason for the underrepresentation of women in science?

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In “[Women in science. Lessons from the baby boom](#)” (National Bureau of Economic Research, Working Paper 29436, October 2021), authors Scott Daewon Kim and Petra Moser collected biographical data from the *American Men of Science (MoS)* on employment, education, marriage, and children for 82,094 male and female scientists in 1956, at the peak of the baby boom generation (those born from 1946 to 1964). Kim and Moser used this information to link scientists with their patents and publications to view the impact children had on productivity on an individual level across demographic groups and after marriage.

Motherhood could also be a possible cause for women underrepresented in science. The authors point out that according to the U.S. Bureau of Labor Statistics American Time Use Survey, women spend about 50 percent more time than men caring for children. In addition, the authors find that mothers who are academic scientists are tenured 27 percent of the time, compared with 48 percent of fathers and 46 percent of women without children. Mothers also wait much longer to receive tenure-track positions. Census data show that after 15 years of marriage, mothers show a constant increase in productivity. Furthermore, these mothers had their first child within 3 years of marriage, which may explain the steady increase in productivity because the child would be older and require less attention than a younger child.

As a result of comparing data from prebaby boom faculty directories with the *MoS*, Kim and Moser discovered that women had less than half the survival rate of men in the science field. This difference in survival accounted for a substantial loss in participation for the generation of baby boom mothers. Mothers, however, who survive in science are very positively selected for patent publishing and produce 5.5 times as many patents as single women and 2.4 more than other married women. In addition, mothers publish more than 1.3 times as many patents before marriage than single and other married women.

In comparing participation rates of women in their 20s at the beginning of the baby boom to women born in the preceding decades, authors estimate that around 180 female scientists, those who had children during the baby boom generation, were lost to American science, therefore eliminating an entire generation of female scientists.