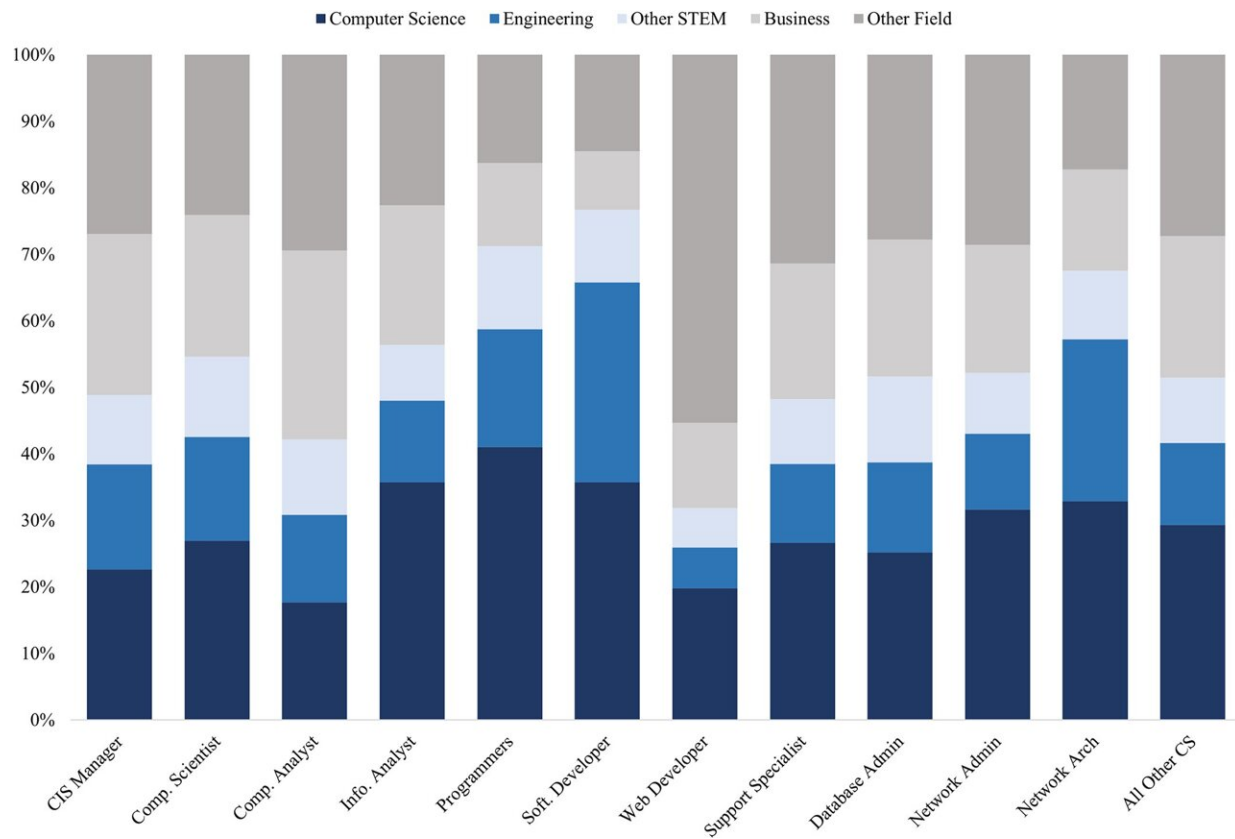


# Rewarding women more like men could reduce wage gap

November 6 2023, by Tom Fleischman



Top degree fields by occupation. Notes: Data come from the 2009–2019 American Community survey. The sample is restricted to those ages 22 to 60 with a Bachelor’s degree working full time (35+ hours/week) with positive income in a computer science occupation (defined by the Census Bureau in Landivar [61]) whose youngest residential child is under 18. Respondents must also have a valid birthyear and received their degree after 1980. Other STEM degree includes Engineering Technologies, Biology and Life Sciences, Math and Statistics, and Physical Sciences. All remaining majors are in Other non-STEM.

Credit: *PLOS ONE* (2023). DOI: 10.1371/journal.pone.0293300

Addressing the shortage of women in STEM-related fields such as computer science is not enough to close the gender gap in both representation and pay: Treating women more like men, especially on pay day, is more important than representation alone, according to Cornell research.

In two recently published papers, Sharon Sassler, professor of sociology and director of undergraduate studies at the Cornell Jeb E. Brooks School of Public Policy, and colleagues examine the field of computer science (CS) and how women who major in and work in the field fare. Though women's representation in STEM fields generally has increased in recent decades, their presence in the CS workforce—which accounts for about half the jobs in STEM fields—remains low, and the [gender wage gap](#) in computer science persists.

"It's not the composition of women in STEM—it's the returns that they experience for the very same attributes as their male counterparts, such as degree attainment," said Sassler, co-author of "[Factors Shaping the Gender Wage Gap Among College-Educated Computer Science Workers](#)," which published in *PLOS-ONE*. Sassler's co-author is Pamela Meyerhofer, M.S. '18, Ph.D. '20, now an economist at the Federal Trade Commission.

In a study of data over a recent 10-year period, women employed in CS jobs earned about 86.6 cents for every dollar that men earned—better than the overall labor force average (82 cents), but still not equitable.

"We keep saying that if we encourage more women to study and enter into STEM fields, the [wage gap](#) will go away," Sassler said. "But it's not

going away."

Sassler and Meyerhofer analyzed American Community Survey data from 2009-19, focusing on working-age respondents between the ages of 22 and 60 who had a [college degree](#) and were employed full-time in CS. Statistical analysis revealed the size of the gender [wage](#) gap, and how [family factors](#) (marriage, children) and human capital factors (degree attainment, occupation within computer science) played a role.

When the researchers controlled for age, degree field and level of attainment, occupation and race, the wage gap narrowed by about 34%, to 91 cents for every dollar a man makes. But the gender wage gap remained.

"And it shows up pretty quickly—by the time women reach their mid-20s, well before women with college degrees start having kids, on average," Sassler said. "All these arguments about, 'Oh, it's because women have families,' that doesn't appear to be what's going on."

Women who are married actually experience a wage premium over unmarried women, while women with young children earn more than childless women. They continue, however, to earn less than men who are married or have [young children](#)—and also experience lower returns on other characteristics they have in common with their male counterparts, such as advanced or engineering degrees.

The wage gap could be due, in part, to the types of jobs women working in computer science hold. Women are more likely than men to work as computing and information science managers or as computer analysts, while more men work as software developers or network architects—jobs with among the highest average wages, contributing to the pay disparity. But differences in occupations accounted for only about a third of the gender wage gap, the researchers found.

The researchers close by challenging the narrative that women's career opportunities are always detrimentally affected by family roles. Instead, they propose that addressing underrepresentation in STEM fields and gender pay disparities requires tackling the ways discrimination plays out in the contemporary labor force among professional workers. Most of the gender wage gap, they write, results from women receiving different returns on their characteristics—as partners, parents and workers.

Sassler also is corresponding author of "[Cohort Differences in Occupational Retention among Computer Science Degree Holders: Reassessing the Role of Family](#)," which published in *Sociological Perspectives*.

That research found that women with degrees in computer science are far less likely than their [male counterparts](#) to be employed in STEM occupations, particularly in computer science jobs. Again, they find that family factors such as marriage or parenthood aren't associated with differences in employment in computer science jobs among women, though fathers are more likely to leave computer science jobs than childless men.

Using the National Science Foundation's Scientists and Engineers Statistical Data System, this work assessed the factors shaping employment in STEM and non-STEM occupations among men and women with bachelor's degrees in computer science.

The researchers found that not only is computer science a field that contains persistent barriers to [women's](#) participation, but that those barriers have become even higher among computer science graduates in this millennium. Unmeasured characteristics—returns on attributes such as parenthood or occupation, for example—rather than family factors accounts for more of the [gender gap](#) in retention among those who obtain degrees in [computer science](#).

**More information:** Sharon Sassler et al, Factors shaping the gender wage gap among college-educated computer science workers, *PLOS ONE* (2023). [DOI: 10.1371/journal.pone.0293300](https://doi.org/10.1371/journal.pone.0293300)

Sharon L. Sassler et al, Cohort Differences in Occupational Retention among Computer Science Degree Holders: Reassessing the Role of Family, *Sociological Perspectives* (2023). [DOI: 10.1177/07311214231195024](https://doi.org/10.1177/07311214231195024)

Provided by Cornell University

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