

Carry Yourself With the Confidence of a Male Scientist

Male researchers are more likely than women to use *novel* and other flattering terms to promote their studies.

OLGA KHAZAN DECEMBER 17, 2019



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Women have made great strides in academia in recent decades, but they still aren't on equal footing with men. Men outnumber women among full-time university faculty. Female professors' salaries lag behind men's. Perhaps this disparity is partly the result of how many plaudits men get

for their scholarly research—and how many they give themselves. Recent research shows that in the sciences, at least, men are more likely than women to deem their own work new and profound.

For a new study, published yesterday in the journal *BMJ*, researchers from Harvard, Yale, and the University of Mannheim, in Germany, analyzed the gender of the authors of more than 6 million scientific studies published from 2002 to 2017. Then, they determined whether the authors had used promotional-sounding words, such as *remarkable* and *unprecedented*, in the titles and abstracts of the journal articles to describe their research. The most commonly used positive word throughout all the studies was *novel*, and men used it 59 percent more often than women did. Men also considered their findings “unique” and “promising,” among other flattering words, more often than women did.

The researchers didn't actually meet the millions of authors they were scrutinizing, so they had to do some guesswork. To determine the authors' probable gender, they compared them to a large, tested database of names along with the gender the names are most often associated with. In cases where there were several authors, the researchers looked at the studies' first and last authors, who are often the ones who make the largest contributions to the work, according to these researchers.

[*Read: The more gender equality, the fewer women in STEM*]

Overall, after adjusting for things such as the year of publication and

how often positive words are generally used in the article's area of study, the authors found that research articles whose first and last authors were both women were 12 percent less likely to use positive terms than articles whose first author or last author, or both, were men. The gender difference was especially large in journals that are cited more often by other scientists, and it held up regardless of the true novelty of the findings. Many of the male authors certainly did important, groundbreaking work—but it was no more important and groundbreaking than the female authors'.

This difference in self-presentation had a tangible impact on the scientists' careers. The articles that were presented more positively were, in turn, more likely to get cited by other scientists down the line. In essence, the men's braggadocio paid off: They tooted their own horn, and other scientists heard the call. "When people look at abstracts, they might consciously or unconsciously be impressed by the language that's used," says Marc Lerchenmueller, a management professor at the University of Mannheim and the lead author of the new study.

This study could help explain why women are underrepresented at nearly every rung of the scientific ladder. As the authors write, "Even the most recent surveys indicate that the proportion of women declines at every career step, including promotion to full professorship. Women also earn lower salaries, receive fewer research grants, and receive fewer citations than their male colleagues."

For every middling man failing up, of course, another competent guy is just trying to make his way in the world. And there's no indication that

the male authors intended to boost their work at the expense of their female colleagues. But there's a reason the phrase *Grant me the confidence of a mediocre white man* took off. This study and others speak to the many advantages men gain by being willing to talk themselves up. Other studies suggest that women are less eager to self-promote than men are. One study published in 2017 found that in the past two decades, male academics have cited their own work 70 percent more frequently than women have, and that women are more likely than men to not cite their own work at all.

In 2014, the journalist Claire Shipman, with her co-author Katty Kay, wrote that she “had a habit of telling people she was ‘just lucky’—in the right place at the right time—when asked how she became a CNN correspondent in Moscow while still in her 20s.” Even Sheryl Sandberg, of *Lean In* fame, was reluctant to attribute her success to her “core skills” instead of luck and hard work in a 2013 interview with CBS, even as she chided women for doing just that. “People tend to comply with stereotypes because otherwise they fear backlash,” Lerchenmueller says. “Women are portrayed as more communal, but men supposedly have this competitive gene.” Lerchenmueller’s study, for what it’s worth, was written by three men. And they made sure to leave the offending positive adjectives out of their own abstract.

[Read: *The confidence gap*]

Laurie Rudman, a social psychologist at Rutgers University who was not involved in the study, points to research she and others have done that suggests women are less likely to promote themselves during job

interviews than men are. Other studies have found that women shy away from self-promotion because they don't feel as entitled to speak highly of their talents as men do. "It could be that women are advised more than men by reviewers and editors to 'tone down' the novelty claims of their work," Rudman told me via email. "Alternatively, women may be censoring themselves (to avoid that criticism). These explanations are not mutually exclusive."

This current study doesn't provide a remedy for this bragging gap in science. Telling women to punch up their findings would be strange, especially as the replication crisis casts doubt on the veracity of many well-regarded scientific studies. And forcing researchers to strip all adjectives from their studies would make scientific journals—which are already very dry reading—positively arid.

[*Read: Psychology's replication crisis is running out of excuses*]

Instead, Lerchenmueller says, the answer might simply be to build awareness that this disparity exists. Perhaps if scientific-journal editors realize that male scientists are more forthcoming about the positive attributes of their research, they can look more closely at descriptors such as *novel* and *unique* to see if the study actually merits them. Or if it's just another case of a confident man leaning in a little too hard.

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