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The Difference Between Men and Women, Revisited: It's About Competition

By HAL R. VARIAN

GENDER differences are a topic of endless discussion for parents, teachers and social scientists. The only place where they cannot be talked about seems to be Harvard.

Luckily, some academic researchers still find the topic important enough and interesting enough to study. A noteworthy case in point is a recent National Bureau of Economic Research working paper by a Stanford economist, Muriel Niederle, and Lise Vesterlund, a University of Pittsburgh economist, titled, "Do Women Shy Away From Competition? Do Men Compete Too Much?" (A nontechnical description of the paper may be found at www.nber.org/digest/feb06/w11474.html.)

It is widely noted that women are not well represented in high-paying corporate jobs, or in mathematics, science and engineering jobs. As the authors observe, the "standard economic explanations for such occupational differences include preferences, ability and discrimination."

To this list the authors add a new factor: attitudes toward competitive environments. If men prefer more competitive environments than women, then there will be more men represented in areas where competition is intense.

Of course, discussions of gender differences of any sort can only be statements about averages; it is clear that there are women who thrive in competitive environments and men who do not. Furthermore, attitudes toward competition may be ingrained or a result of factors like social stereotyping.

Is there any evidence that the hypothesis is true? Do men really prefer more competitive environments than women? One could cite anecdote after anecdote, but the authors took a much more direct approach: they ran an experiment.

By using an experiment, the authors were able to determine not only whether men and women differ in their willingness to compete, but more important, whether they differ in their willingness to compete conditioned on their actual performance.

The economists asked 80 subjects, divided into groups of two women and two men, to add up sets of five two-digit numbers for five minutes. The subjects performed the task first on a piece-rate basis (50 cents for each correct answer) and then as a tournament (the person with the most correct answers in each group received $2 per correct answer, while other participants received nothing). Note that a subject with a 25 percent chance of being a winner in the tournament received the same average payment as in the piece-rate system.

All participants were told how many problems they got right, but not their relative performance. After completing the two tasks, the subjects were asked to choose whether they preferred a piece-rate system or a tournament for the third set of problems.

There were several interesting findings in this experiment. First, there were no differences between men and women in their performance under either compensation system. Despite this, twice as many men selected the tournament as women (75 percent versus 35 percent).

Even if one accounts for performance by comparing only men and women with the same number of correct answers, the women have a 38 percent lower probability of choosing the tournament compensation.

Why were the men much more likely to choose the tournament? Perhaps it was because they felt more confident about their abilities. The data support this hypothesis, with 75 percent of the men believing that they won their four-player tournament, while 43 percent of the women thought they were best in their group.

Though both groups were overconfident about their performance, the men were much more so. So, women were less likely than men to choose the tournament compensation system even when actual or believed performance was considered.

The authors looked at a number of possible explanations for this finding, one being different risk aversion between men and women. But they rejected this explanation since the difference in risk aversion required to explain the results would have been implausibly large.

The results of this experiment are consistent with the finding by a Berkeley finance professor, Terry Odean, that men trade stocks excessively, apparently because they (wrongly) feel that they have exceptional ability to pick winners. Women trade less, but do better on average, because they are more likely to follow a buy-and-hold strategy.

The authors summarized their experimental results by saying, "From a payoff-maximizing perspective, high-performing women enter the tournament too rarely, and low-performing men enter the tournament too often." The low-performing men and the high-performing women are both hurt by this behavior but, in this experiment at least, the costs to the women who did not choose the tournament when they should have exceeded the costs to the men who should have avoided the tournament.

One should not read too much into one study. But if it is really true that women choose occupations that involve less competition, then one may well ask why. Sociobiologists may suggest that such differences come from genetic propensities; sociologists may argue for differences in social roles and expectations; developmental psychologists may emphasize child-rearing practices. Whatever the cause, Ms. Niederle and Ms. Vesterlund have certainly raised a host of interesting and important questions.

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