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Do Women Shy Away From Competition?

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"There are 'large gender differences in the propensity to choose competitive environments' and this needs to be taken into account in understanding why women are under-represented in many fields of work."

The proportion of women in highly paid executive positions and in the professorial ranks of academic science and engineering is low relative to the proportion of women in the labor force. A number of explanations for this difference have been advanced. If women do not enjoy the kind of work involved in high profile managerial positions or scientific careers, or if the long working hours required in these careers conflict with the ability to raise children, then women may avoid them. Because women on the whole are less likely to be in the highest scoring group on tests of mathematical achievement, they also may be less likely as a group to be successful in competitive science and engineering positions that reward mathematical talent. Some also have argued that past discrimination has kept women from highly paid executive and academic positions, and that women subsequently avoided those careers simply to escape discrimination.

In *Do Women Shy Away From Competition? Do Men Compete Too Much?* (NBER Working Paper No. [11474](#)), co-authors Muriel Niederle and Lise Vesterlund consider another possibility, that women as a group dislike competition more than men, even if they are of the same ability. If women seek to avoid competition, then they may be less successful in obtaining promotions and more lucrative jobs.

To test their hypothesis, the authors put 80 paid volunteers through a series of short tasks compensated either on a competitive winner-take-all or on a non-competitive piecework basis. In each trial, groups of four participants, always two women and two men, were given the job of finding the correct sum for as many sets of five two-digit numbers as they could in five minutes. The payment for the first task was awarded on a non-competitive basis by paying a piece rate of 50 cents for each correct answer. Payment for the second task was a competitive winner-take-all "tournament." Losers received nothing and the person in each group with the largest number of correct answers was awarded \$2 per correct answer. For the third task, participants chose either piecework payment or the tournament compensation.

Men and women answered the same number of problems correctly under both compensation systems. But when allowed to choose compensation rates for the third task, 75 percent of the men chose tournament compensation while only 35 percent of the women did so. When the authors compare men and women with the same performance in the second-task tournament, the women have about a 38 percent lower probability of entering the subsequent tournament than the men. This implies that among high performing participants -- that is, participants who earn more money from the tournament than the piece rate -- more men than women enter the tournament. Among low performing participants, it is the men who enter the tournament too much, and hence do not earn as much as they could.

In this experiment, large gender differences in tournament entry can be observed, even in a case where women are as good as men, where discrimination is absent, and where the time spent on each task is limited, so that time conflicts with raising children are not an issue. What can account for this gender difference?

One possibility why men enter a tournament so much more than women do is that men may feel more confident about their ability (even though they are not actually better). While both men and women are overconfident about their relative performance in the second-task tournament, men are much more so. About 75 percent of the men believe that they won the second-task tournament of four participants. Naturally, most of them are wrong. However, even comparing men and women who have the same beliefs about their relative performance in the second-task tournament (for example, only comparing men and women who thought that they won), the men decide to participate in the subsequent tournament at a much

higher rate than the women. The gender difference for tournament entry remains about 30 percentage points.

Other possible explanations are that women may shy away from tournaments because they dislike facing the possibility of not being paid for their performance, that is they are more risk averse, or they dislike receiving feedback about their relative performance. A final and fourth task in this study shows that these are indeed factors that can contribute to women and men behaving differently. However, they cannot explain the majority of the gender differences in deciding whether or not to enter a tournament.

The authors conclude that there are "large gender differences in the propensity to choose competitive environments" and that this needs to be taken into account in understanding why women are under-represented in many fields of work

-- Linda Gorman

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