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# Gender and Competition

## Do competitive environments favor men more than women?

**Research by Uri Gneezy | By Jessamine Chan**

**From evolutionary biology to discrimination to personal preferences, science and society have offered many reasons for why women have not caught up with men in the workforce. New research suggests that part of the answer lies in the different ways men and women react to the incentive of competition.**

Gender gaps are observed in a variety of economic and social environments, including the widely acknowledged dearth of female CEOs.

One reason for the gender gap may be explicit or subtle forms of discrimination against women. Researchers also have pointed to preferences, i.e. unobservable factors such as how much men and women choose to sacrifice for their careers. A new study, "Gender and Competition at a Young Age," looks at an alternative explanation for why the gender gap exists.

In the study, assistant professor **Uri Gneezy** and Aldo Rustichini of the University of Minnesota suggest that one of the possible factors creating a gender gap is that men are more competitive than women in the short term. For this reason, when the competitiveness of the environment increases, the performance of men increases relative to that of women.

### The Race

Choosing a natural environment over a laboratory, Gneezy and Rustichini tested their theory in a physical education class

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of 140 children (75 boys and 65 girls), ages 9 and 10. In a regular class exercise, the children ran alone over a short track and then in pairs with different gender compositions, with the teacher measuring the speed. The authors then studied the speed of the children in the race.

When the children ran alone, there was no difference in performance. In competition, boys but not girls improved. The girls in the study did not perform worse, but rather the same, as if there were no competition at all. On the other hand, the boys put much more effort into their performance once they were competing.

By choosing to examine subjects in this age group, Gneezy and Rustichini sought to understand whether differences in competitiveness are due to socialization in the teenage years or begin at a much younger age. In addition, at ages 9 and 10, gender plays an insignificant role in speed in a short running race.

As their results show, the age of 9 is already old enough for socialization to work. In fact, it has been suggested that the socialization of gender may even begin at birth.

The children in the study did not know they were being observed, nor was there any motivation for their performance besides the competition itself, as opposed to lab subjects who are typically paid. This suggests that males are more competitive even when only intrinsic motivation is present.

One factor potentially influencing performance was the fact that in the open competition, the children saw the two competitors as they ran, receiving visual feedback during the race. Therefore, the children knew exactly how much effort would be needed to win.

The results demonstrate that the gender composition of the competing group affects the outcome of the race. Boys improved in both mixed and homogenous groups, but they improved more when running against girls. The incentive of competition proved particularly weak when girls ran against other girls, resulting in even slower running times than when running alone.

The study builds on earlier work by the authors and Muriel Niederle of Stanford University, which also showed that competition improves the performance of males more than females, creating a gender gap that does not exist in noncompetitive environments.

The earlier study tested responses to a mental rather than physical task. In a lab experiment, men and women were asked to solve simple maze problems on a computer and were paid according to different criteria. The average age of the participants was 23.

When subjects were paid for individual performance, there was no significant gender difference in the results. When subjects were paid on a competitive basis and only the subject with the best outcome was paid, the performance of the male subjects increased significantly, while that of the female subjects remained constant.

"In situations where only the best person in the group is rewarded, males react very differently to this incentive than females do," says Gneezy.

Gneezy suggests that CEOs creating incentives in their firms should be aware that making the internal environment more competitive might create a bias that helps men and puts women at a relative disadvantage.

In addition to workforce issues, Gneezy and Rustichini's findings also relate to the debate over single-sex public schools and single-sex classrooms. Standard legal interpretations of Title IX, which forbids discrimination on the basis of gender, suggest that single-sex schools are against the law.

While the authors do not argue strongly for or against single-sex schools and classrooms, they do caution that the competitiveness of the educational environment should be considered. They warn that in mixed-gender schools, a difference in competitiveness and thus performance may appear as a difference in talent, penalizing girls as a result. A single-sex educational system, while it does have its limitations, may give a more balanced picture of the merits and talents of both boys and girls.

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## Competition in the Workforce and Classroom

Similar to the children's races, applying for jobs is a short-run process.

Most job searches involve a high level of competition. In fields such as sales, the ability to compete may be one of the required skills or qualities. However, in fields such as marketing, creativity may be the most highly prized attribute, rather than competitiveness.

"For some jobs, the selection process might be more competitive than the job itself," says Gneezy. "So in the end, what you get is the most competitive person, not necessarily the person most qualified to do the job."

The authors suggest that if the behavior of subjects is affected by the competitive nature of the selection procedure, then the optimal selection procedure should take this into account, and not be more competitive than the job a person is called on to perform.

"People doing the hiring should think about what the really important aspects of each job are," says Gneezy. "If competitiveness is not one of them, give job applicants tasks that are more creative, more related to the job—or base the selection more on the personal impression you get in the interview."

## Understanding the Gap

The study explains one reason for the gender gap, but Gneezy notes that the research looks only at short-run responses to competition. Studies focusing on the long run may produce a different set of results.

"Our study looks at a statistical woman and a statistical man," says Gneezy. "The results don't mean that a specific woman will be less competitive, and in fact, a particular woman may be more competitive than any man I know. If you look in general at the population, then you see the differences." ■

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