

31,735 views | Jan 30, 2017, 10:02am

# Gender Study: Boys Think They Are Smarter, But Girls Work Harder And Perform Better



Paolo Gaudiano and Ellen Hunt Contributor

## TWEET THIS

- girls are much more aware of their true strengths and potential,
- men overestimate their own intelligence, and overestimate the value of pure “smarts” for performance and success.



Credit: Shutterstock

A recent article published in *Science* is causing an uproar in social and mass media, because it shows that certain forms of gender bias are observed in children as young as six years of age. The results are being widely interpreted as showing that girls are less confident about their intelligence from a young age, when in fact a careful reading of the article reveals exactly the opposite: from as early as six years of age, girls are much more aware of their true strengths and potential, and they realize that working hard and being nice are more valuable traits than

simply being “smart” and more closely linked to success.

While we disagree with the general interpretation of the article, we think that the reaction may be rooted in existing gender biases in the workforce: namely, men overestimate their own intelligence, and overestimate the value of pure “smarts” for performance and success. 🐦 By interpreting correctly the results reported in the article, we see a clear opportunity to erode these biases by building upon the natural tendency of young girls to see themselves as hard-working, nice, and highly likely to succeed.

To begin, let’s summarize the findings from the article, which includes multiple experiments. The first experiment probes how five-, six- and seven-year-old boys and girls associate smartness and niceness with gender. The children were given verbal descriptions of someone (using gender-neutral terms) who is “really, really smart,” or “really, really nice.” In the first part of this experiment, the children were shown pictures of male and female individuals, and asked in various ways to associate these concepts with the male or female figures.

For this experiment, the researchers counted how many times a child associated a particular trait with her or his own gender, to calculate a group score between 0 and 1, representing the proportion of children who associate that trait with their own gender. For instance, if 80 of 100 five-year-old girls associate “nice” with a female picture, then the score for the five-year-old girls’ group would be 0.8. Hence, when reading the article, a score of 0.5 for a particular group means that the group has no gender bias, *i.e.*, the group is equally likely to associate the trait with its own gender or the opposite gender. In contrast, scores below 0.5 represent a bias in favor of the opposite gender, while scores above 0.5 represent a bias in favor of the same gender.

At the age of five, the scores between boys and girls are virtually identical for both “smart” and “nice,” hovering around a score of 0.7. In other words, 70% of boys associate males with being smart and with being nice, and 70% of girls associate females with being smart and with being nice.

At the ages of six and seven, the results change: boys continue to be

more likely to associate “smart” with males (around 0.65), while girls tend to associate males and females equally with “smart.” Sadly, the fact that the boys’ score is higher than the girls’ has been widely misinterpreted to mean that girls think that boys are smarter, but this is simply not true: the results show that, as early as six years of age, girls have already figured out that being smart has nothing to do with gender, while boys persist in their delusion of intellectual superiority.

However, when it comes to associating “nice” with gender, we see a very different picture: girls associate females with “nice” consistently across all ages (about 0.7), whereas boys start out at age five thinking that males are more likely to be nice (about 0.65), but at six and seven years of age they are actually slightly more likely to associate “nice” with females (about 0.45). Hence boys and girls agree, from as early as six years of age, that girls tend to be nicer than boys.

The article then describes two other experiments. In one experiment, children are shown two made-up games. One (randomly chosen) game is described as being for “children who are really, really smart” and the other for “children who try really, really hard.” The children were then asked four questions that probed their level of interest in each game. The results are less clear, but generally they show that after the age of five, boys tend to show more interest in the “smart” games than girls. The authors conclude that “young children’s emerging notions about who is likely to be brilliant are one of the factors that guide their decisions about which activities to pursue.” The general conclusion drawn by the media is that girls think that boys are smarter and they avoid choosing tasks that require brilliance, thus excluding themselves from certain career choices.

This conclusion, however, is perplexing: what should be concluded from the study is that girls are more likely to be drawn to a game that requires trying hard, whereas boys prefer to play games that requires an innate capability that they believe to possess disproportionately. If anything, the general interpretation of this study demonstrates a form of confirmation bias in the adults who jump to the conclusion that being less interested in activities for the “really, really smart” is a bad thing, because it allegedly implies lack of confidence or preclusion from certain career opportunities.

But there is another experiment, which the authors only mention in passing and relegate to the [supplementary materials](#), that shows even more promising tendencies in girls. The children were asked “who do you think gets the best grades in school?” and “who do you think is the first in their class?” While the results for five-year-olds were similar and well above 0.5, the boys’ scores drop to just above 0.5 by the age of seven, while the girls’ scores remain very high, nearly 0.8 for all three age brackets.

In other words, the same girls who believe that being smart has nothing to do with gender, also believe that (1) girls tend to be nicer than boys, (2) activities that require you to try hard are more interesting than those that only require “smarts,” and (3) girls are likely to outperform boys in school.

If you are reading this column you are probably a leader or aspiring to be one. We hope you will agree that to be successful, working hard is usually more important than being innately “smart,” whatever that means. Being “smart” is like being “tall”: you may grow to be five feet tall or seven feet tall, but it’s not something you can choose or control. If you are a great jockey (of the horse-racing variety), you are more likely to be at the low end, and if you are a basketball star, you are more likely to be at the high end. But you will be neither, unless you “try really, really hard.”

With enough hard work you can be a successful NBA player even if you are only 5’-3” like Muggsy Bogues. Because ultimately, performance is the great equalizer, and trying hard is the best way to improve your performance. Oh, and being nice helps, too.

*Please [subscribe to our newsletter](#) and visit [the Aleria website](#) to learn more about our work.*



**Paolo Gaudiano and Ellen Hunt** Contributor

---

We believe the future demands a new mindset in which diversity and inclusion are explicitly linked to the success of organizations. Our goal in the work that we do and i... [Read More](#)

---