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"Who is really, really smart?" Early differences in boys' and girls' assumptions about intelligence

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Common stereotypes associate brilliance with men more than women. Evidence for this association is everywhere around us, but maybe easiest to detect in portrayals of brilliance and genius on TV and in the movies. The vast majority of characters that are supposed to be brilliant, such as Sherlock Holmes or Dr. House, are men. Because of this stereotype, women may feel they are less likely to be brilliant and thus less likely to succeed in careers that are thought to require this characteristic. As a result, women might be underrepresented in these careers. In fact, in a paper published in the journal *Science* in 2015, researchers found that women are indeed underrepresented in fields that are thought to require brilliance – fields that include some of the most prestigious careers in our modern society, such as being a scientist or an engineer.

Might this gender imbalance have its roots in early childhood? To answer this question, we investigated the development of the "brilliance = men" stereotype. If this stereotype is acquired learned early, it may gradually shape the sorts of careers that girls see themselves as being suited for.

We first investigated the developmental trajectory of children's beliefs about which gender is "really, really smart" – a child-friendly way of talking about brilliance. We told a sample of children from the United States a short story about a person who was really smart, without providing any clues to the person's gender. We then showed children pictures of 4 unfamiliar adults (2 men and 2 women) and asked them to guess which one of them was the protagonist in the story. We looked for whether they picked men or women as being "really, really smart." Our results showed an interesting developmental difference. At the age of 5, boys' and girls' answers were very similar. Both boys and girls picked people of their own gender as being "really, really smart." However, starting at age 6, girls became less likely than boys to do this. Girls picked females as "really smart" less often than boys picked males. These answers were given by both white and nonwhite children, and did not seem to vary as a function of parental education and income. This may be the beginning of the "brilliance = males" stereotype we see in adults.

We then wanted to see if this stereotype related to the activities children were interested in. To answer this question, we showed 5-, 6-, and 7-year-olds an unfamiliar activity and told them that it was for children who are "really, really smart." We then asked children a number of questions to see how interested they were in this activity. The results showed a similar trajectory to children's beliefs about brilliance. At age 5, boys and girls were equally interested in the activity for "really smart children," but girls became less interested in it (relative to boys) at the age of 6 and 7. In fact, girls' interest in this activity was lower if they endorsed the stereotype that brilliance is a male quality. Six- and 7-year-old girls' lower interest towards the brilliance game didn't have anything to do with the game itself: when we described the exact same game as being for kids who "try really, really hard," girls were just as interested in it as boys.

To conclude, our studies suggest the stereotype equating brilliance with males seems to be acquired early and is related to the activities that boys and girls are interested in. It

is possible that, in the long term, this stereotype steers many young women away from careers that are perceived as requiring brilliance.