

THE WAY FORWARD Women in Science

Janet Shibley Hyde

Janet Shibley Hyde is Helen Thompson Woolley Professor of Psychology and Women's Studies at the University of Wisconsin, USA. She earned her Ph.D. in Psychology in 1972 from the University of California, Berkeley. Her research, over three decades, has focused on psychological gender differences and women balancing work and family. She is best known for her meta-analyses of research on gender differences, including gender differences in mathematics performance (1990), sexuality (1993), self-esteem (1999), and temperament (2006). Based on these and others' meta-analyses, she proposed the Gender Similarities Hypothesis in 2005. Current work focuses on the emergence of gender differences in depression in adolescence. Since 1990 she has been co-director of the [Wisconsin Study of Families and Work](#). She is the author of two undergraduate textbooks, *Half the Human Experience: The Psychology of Women and Understanding Human Sexuality*. She has held a number of administrative posts, including Associate Vice Chancellor, with responsibility for gender equity, at the University of Wisconsin. A fellow of the American Psychological Association and the American Association for the Advancement of Science, she has won numerous awards, including the Heritage Award from the Society for the Psychology of Women for her career contributions to research on the psychology of women. In 2002 she was listed among the top 100 psychologists in the world in terms of citations in introductory psychology textbooks.

Abstract:

The Gender Similarities Hypothesis: Implications for Mathematics and Science

The Differences Model, which argues that men and women are vastly different psychologically, dominates the popular media and feeds the stereotypes of the lay public. I propose, in contrast, the Gender Similarities Hypothesis, which holds that males and females are similar on most, but not all, psychological variables. I review relevant meta-analyses of research on psychological gender differences, including mathematical performance, verbal ability, and spatial ability, as well as self-esteem and leadership. Gender differences are small or nonexistent in almost all of these areas, consistent with the Gender Similarities Hypothesis. For example, for mathematics performance, the effect size for gender differences in samples of the general population is $d=-0.05$. I then explore the implications of this hypothesis for mathematics and science education, including the question of single-sex education, and for the career trajectories of women in science. Over inflated claims of gender differences carry substantial costs in areas such as the workplace and relationships.

The Gender Similarities Hypothesis is also consistent with the Expansionist Theory concerning women balancing work and family. Expansionist Theory holds that multiple roles, rather than being a source of stress, are psychologically beneficial. Processes that may contribute to these beneficial effects include added income, increased social support, greater opportunities to experience success, and greater similarity of experiences between spouses. I consider the implications of Expansionist Theory for women in science.