

Undergraduate Research Symposium May 17, 2013 Mary Gates Hall

Online Proceedings

POSTER SESSION 2

Commons West, Easel 18

12:45 PM to 2:15 PM

The Effects of Positive Stereotypes on Women's Math Identification

Alejandro Ramon (Alejandro) Pena, Senior, Psychology

Mentor: John Oliver Siy, Psychology

Mentor: Sapna Cheryan, Psychology

Being the target of a positive stereotype (e.g., "women are nurturing") can elicit many negative effects. The current study investigates the influence of positive stereotypes on women's math performance and their identification with science, technology, engineering, and math (STEM) fields. In the present study, some women were the target of a positive stereotype before being asked to take a math test. Women who were positively stereotyped did not differ in their math performance compared to women who were not the target of a positive stereotype. However, positively stereotyped women felt that it was less important for them to do well in math than women who were not the target of a positive stereotype. These results suggest that positive stereotypes may lead women to identify less with STEM fields, an important predictor of success or retention in a field, and may be a factor in perpetuating gender disparities.

SESSION 2U

STEREOTYPING AND PREJUDICE

Session Moderator: Allison Master, Psychology

175 JHN

3:45 PM to 5:15 PM

* Note: Titles in order of presentation.

How are Positive Stereotypes Perceived? It Depends on Who Says Them

Hua (Wenwen) Ni, Fifth Year, Psychology

Undergraduate Research Conference Travel Awardee

Mentor: John Oliver Siy, Psychology

Mentor: Sapna Cheryan, Psychology

Asian Americans respond negatively to being the target of a positive stereotype (e.g., Asians are smart) even though these stereotypes are often attempts at praising their group. The

current work focuses on how targets' responses to positive stereotypes depend on the race of the stereotyper. Asian and Asian American participants imagined an interaction with a White classmate or an Asian classmate who stated a positive stereotype of their group or stated no stereotype. Results showed that participants responded more positively when the stereotyper was Asian compared to when the stereotype was White. Participants did not respond differently to White and Asian classmates who stated no stereotype, suggesting that it is positive stereotypes which lead to different responses based on who says them. These results show that group membership is an important consideration when thinking about stereotypes.

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Using Group Work to Recruit Women to STEM: A Goal Congruity Approach

Amanda Kay Montoya, Senior, Psychology

Mary Gates Scholar, Undergraduate Research

Conference Travel Awardee

Mentor: Sapna Cheryan, Psychology

Mentor: Allison Master, Psychology

It is well-established that women are underrepresented in science, technology, engineering, and math (STEM) fields; however, the variability in women's participation among STEM fields is often underreported. Women received 60% of bachelor's degrees in biology but only 18% of computer science degrees in 2009. One explanation for this variation may be the differing social stereotypes of the fields. Male-dominated STEM fields are typically stereotyped as asocial, which may lead women to think that these fields will not fulfill their communal goals; that is, these fields will not give them opportunities to work with and help others. Three studies examined how communal goals relate to interest in six STEM fields. Study 1 (N = 120) found that women were more likely than men to endorse communal goals. Additionally, women were more interested in STEM classes they thought would fulfill

their communal goals. Participants' personal communal goal endorsement was negatively correlated with their interest in male-dominated STEM fields like computer science. Study 2 (N = 296) examined group work as a potential factor that could affect perceptions of communal fulfillment in science classes. We found that classes with group work were perceived to be higher in communal fulfillment. Classes low in female representation, engineering and computer science, were perceived to have less group work than classes with higher female representation, biology and psychology. Additionally, preference for group work was positively correlated with communal goals. In Study 3 (ongoing) we experimentally manipulated group work in an introductory computer science syllabus, to see whether adding group work to a class would increase women's interest by appealing to their communal goals. These findings suggest that emphasizing the potential for communal interactions may be effective in recruiting women into STEM fields where they are currently underrepresented.

POSTER SESSION 3

Commons West, Easel 35

2:30 PM to 4:00 PM

How "Following Your Passion" May Explain Gendered Career Choices

Lily Ji (Lily) Jiang, Senior, Biology (Molecular, Cellular & Developmental)

Mentor: Sapna Cheryan, Psychology

Mentor: John Oliver Sij, Psychology

American students regularly get advised to "follow your passion" in choosing a career. However, people's passions are often shaped by what is considered appropriate for their gender. Could encouraging students to follow their passion inadvertently perpetuate gendered career choices? The present work examines how the cultural ideal to follow your passion may maintain gender imbalance in stereotypically masculine or feminine careers. In the current study, some participants were randomly assigned to write about what it means to "follow one's passion" before writing about their career plans. We hypothesized that women who wrote about following their passions would report more feminine career plans compared to women who did not. Similarly, we predicted that men who wrote about following their passions would report more masculine career plans compared to men who did not. The American cultural ideal to "follow one's passion" may help reinforce the gender makeup of career fields, contributing to the underrepresentation of women in certain fields like science.

POSTER SESSION 3

Commons West, Easel 33

2:30 PM to 4:00 PM

Perceptions of Group Work in STEM Fields: Explaining Women's Disinterest in Computer Science

Elizabeth Erin (Ellie) Stillwell, Junior, Psychology

Amanda Kay Montoya, Senior, Psychology

Mary Gates Scholar, Undergraduate Research

Conference Travel Awardee

Mentor: Sapna Cheryan, Psychology

Mentor: Allison Master, Psychology

In recent years, science, technology, engineering, and mathematics (STEM) fields have made strides towards reducing gender disparities. However, in the field of computer science, women continue to receive less than 20% of bachelor's degrees awarded. In the current research we explore if this continuing disparity is partly due to a perceived lack of group work in computer science. Previous research has shown that women tend to endorse communal goals (e.g., working with and helping others) more than men do, and that the perception that an academic field fulfills communal goals predicts women's interest in those fields. In the current research, 293 undergraduate students (184 female, 109 male) answered questions measuring preference for group work, perceptions of goal fulfillment in classes where students work individually and classes where students work in groups, perceptions of group work in different science classes, and personal goal endorsement. Consistent with our prediction, results indicated that classes with group work were perceived as having more communal goal fulfillment than classes with individual work, and male-dominated STEM fields (i.e., computer science and engineering) were perceived as having less group work than female-dominated STEM fields (i.e., biology and psychology). These results show that group work is related to communal goal fulfillment. Because communal goal fulfillment predicts women's interest in academic fields, we expect that women would be less interested in academic fields that are perceived to have less group work, such as male-dominated STEM fields. Based on our results, we predict that increasing perceptions of group work in computer science may increase women's interest by boosting perceptions that computer science is able to fulfill communal goals.

POSTER SESSION 3

Commons West, Easel 34

2:30 PM to 4:00 PM

Can Being Overweight Increase Recognition of Asian Americans' American Identity?

Nathasha An Wei (Nathasha) Soon, Senior, Economics, Psychology

Mentor: Sapna Cheryan, Psychology

Mentor: Caitlin Handron, Psychology, Stanford University

Asian Americans are not only seen as less American than White Americans, but are also subject to the pervasive 'perpetual foreigner' stereotype. Is weight a factor that affects how American Asian Americans are perceived to be? In study 1, participants were randomly assigned to evaluate one of three pictures of Asian American women on perceptions of American identity. Between conditions, the photos were edited to create a heavier and a lower weight version of each woman, thereby controlling for other cues to American identity, such as hair and clothing. Results showed that heavier Asian American women were perceived as more American than their lower weight counterparts. In study 2, using the same methods, we tested whether weight would affect perceptions of the legal status of Asian American men. Results revealed that the heavier versions of the Asian American men were perceived as more American and as less likely to be in the US illegally than the lower weight versions of the same men. Taken together, these studies provide evidence that being overweight can increase recognition of Asian Americans' American identity and may help protect against discrimination based on racial stereotypes.