Supporting Online Material for

Implicit Gender–Science Stereotype Outperforms Math Scholastic Aptitude in Identifying Science Majors

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Methodological Details

Participant self-selection

While very large, these data are not representative of U.S. citizens with at least some college education. Participants self-select when deciding to visit the site, in choosing the gender-science task (on the *Demonstration* site) or when persisting to completion (on either site). Choices might have been influenced by particular media reports, blog or chatroom discussions, recommendations of others, class or work assignments.

Gender-Science IAT Categories and Stimuli

Male	Female	Science	Liberal Arts
Boy	Girl	Astronomy	Arts
Man	Woman	Biology	English
Male	Female	Chemistry	History
Father	Mother	Engineering	Humanities
Grandpa	Grandma	Geology	Literature
Husband	Wife	Math	Music
Son	Daughter	Physics	Philosophy
Uncle	Aunt		

Rating the Science-ness of Academic Major Categories

For purposes of displaying in Figures the twelve academic major categories in an approximate order by increasing science content, we asked 19 psychology graduate students who were unaware of our hypotheses to estimate the science requirements of

majors in each category. Inter-rater reliability was high, Cronbach's α = .985.

Instructions for raters were delivered via email as follows:

For a study examining how choices of college majors relate to gender stereotypes, I ask you to judge a list of college majors given below. Please place at the top of the list the major that you regard as requiring the greatest amount of scientific course work. At the bottom should be the major that you judge to require the least amount of scientific coursework.

Some categories lump together several majors that may differ in science requirements. For these do your best to make the requested judgment. If you cannot distinguish between categories, place them in a group (order within the group is unimportant). Put a blank line between the tied group and a more science-requiring major above and a less science-requiring major below.

If these instructions are unclear (they haven't been used before) please let me know. I will forward any clarifications to others.

The list is initially in alphabetical order. "There are no correct answers."

Please RESPOND ONLY TO ME so ratings will be independent. You can send back just the re-ordered list, with most scientific at top.

********** (Instructions) **********
Move to the top of this list the major subject that requires the greatest amount of scientific course work. At the bottom should be the major requiring the least amount of scientific coursework. Rank order those in between. When you cannot distinguish between majors, place them in a group (order within the group is unimportant). Put a blank line between the tied group of majors and a more science-requiring major above and a less science-requiring major below.

A. Biological sciences/life sciences
B. Business
C. Communications
D. Computer and information sciences
E. Education
F. Engineering, mathematics, or physical sciences/science technologies
G. Health professions or related sciences
H. Humanities/liberal arts
I. Law or legal studies
J. Psychology
K. Social sciences or history
L. Visual or performing arts

Implicit-Explicit Stereotype Relations

The relation between scores on the gender–science–arts IAT and those on the explicit composite gender–science–arts stereotype (r = .21) was little stronger than that between the IAT and the science-only explicit stereotype (r = .20). The IAT correlated r = .14 with the explicit arts–female stereotype. In multiple regression models predicting the implicit stereotype from the explicit stereotypes, the respective R^2s for science stereotype alone, liberal arts alone, and the two together were .040, .020, and .048. Thus, explicit gender–science association uniquely accounted for 2.8% of the variation in implicit stereotyping, while explicit gender–liberal arts association accounted uniquely for less than 1 percent. This pattern of superior predictive value for the science–male stereotype over the arts–female stereotype held regardless of participant sex and major (STEM or not). Thus, the implicit science–male/liberal arts–female stereotype, as measured by this IAT, is more related to explicit science–male associations than to explicit liberal arts–female ones—though not strongly related to either as is common with implicit–explicit relations for social attitudes and stereotypes (Gschwendner, Hofmann & Schmitt, 2005; Nosek, 2005).

References

Gschwendner, T., Hofmann, W., & Schmitt, M. (2008). Convergent and predictive validity of implicit and explicit anxiety measures as a function of specificity similarity and content similarity. *European Journal of Psychological Assessment, 24*, 254–262.

Nosek, B. A. (2005). Moderators of the relationship between implicit and explicit evaluation. *Journal of Experimental Psychology: General, 134*, 565-584.