
*Wired for Gender:
Minimal Cues have Powerful
Consequences*

Clifford Nass
Stanford University

To Talk is Human

- Speaking is fundamental
 - IQs as low as 50
 - Brain of less than 1/3 normal size (400 grams)
 - Listening to speech is fundamental
 - *Womb*: Mother's voice differentiation
 - *One day old*: Differentiate speech vs. other sounds
 - *Four days old*: Differentiate native language vs. other languages
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Speech is more than words

- Humans are acutely aware of para-linguistic cues
- Gender is the first attribute one recognizes in a *human* voice
- Other voice characteristics are also important
 - Age
 - Accent
 - Personality
 - Emotion

Will people treat voices from *technology* as real people?

- Do voice-based technologies have gender?
 - Will people socially identify with technology-based voices?
 - Will people apply stereotypes to technology-based voices?
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Study 1:

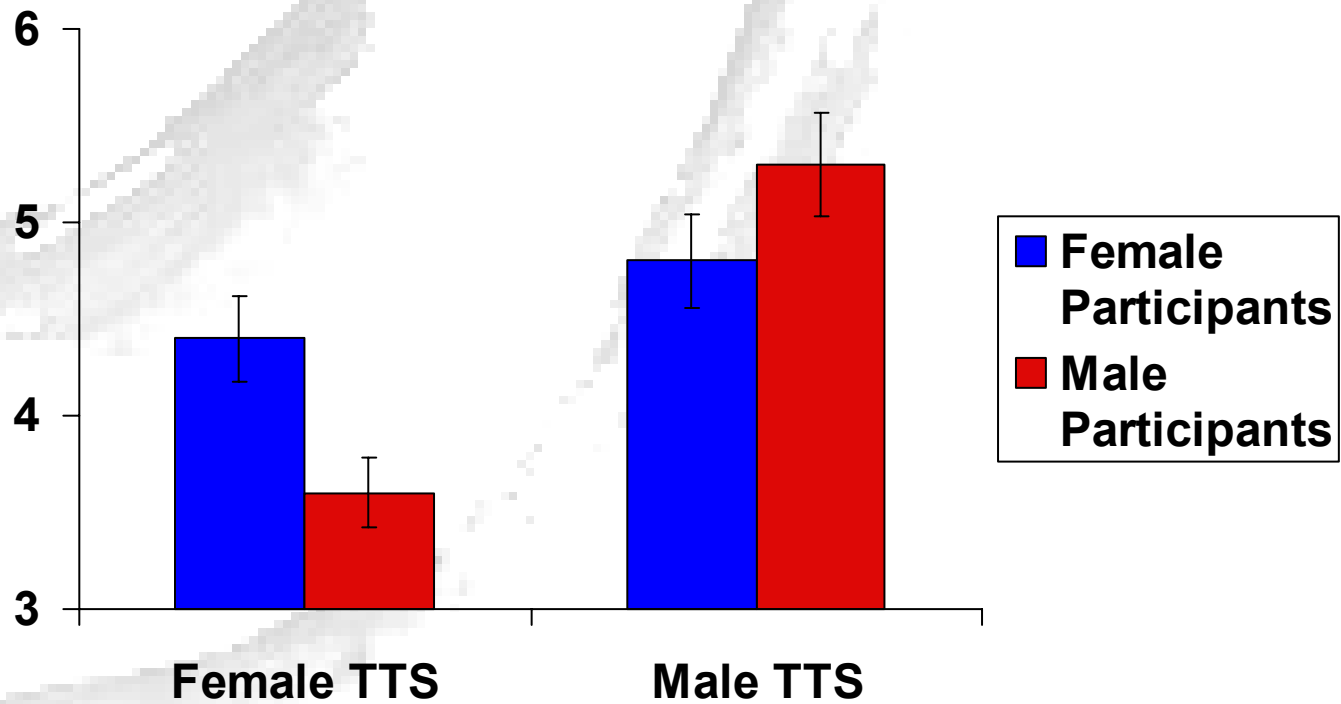
Conformity and Social Identification

- Obviously synthetic voices
 - Choice-dilemma
 - Voice provides suggestion and rationale
 - Participant fills out paper-and-pencil questionnaire
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Sample Choice Dilemma

- Amy and John are college students who have been living together in an apartment near campus. John's allowance buys food and they are sharing the rent. Amy has told her parents that she is rooming with another girl, and now her parents are coming to visit their daughter. They have never seen the apartment. Amy is considering asking John to move out for the time that her parents are in town.

Conformity



Other Results

- When gender of voices matches:
 - More likeable
 - More credible

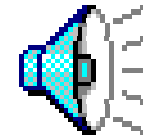
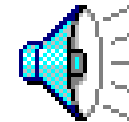
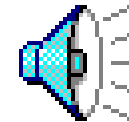
Study 2:

Gender Stereotyping

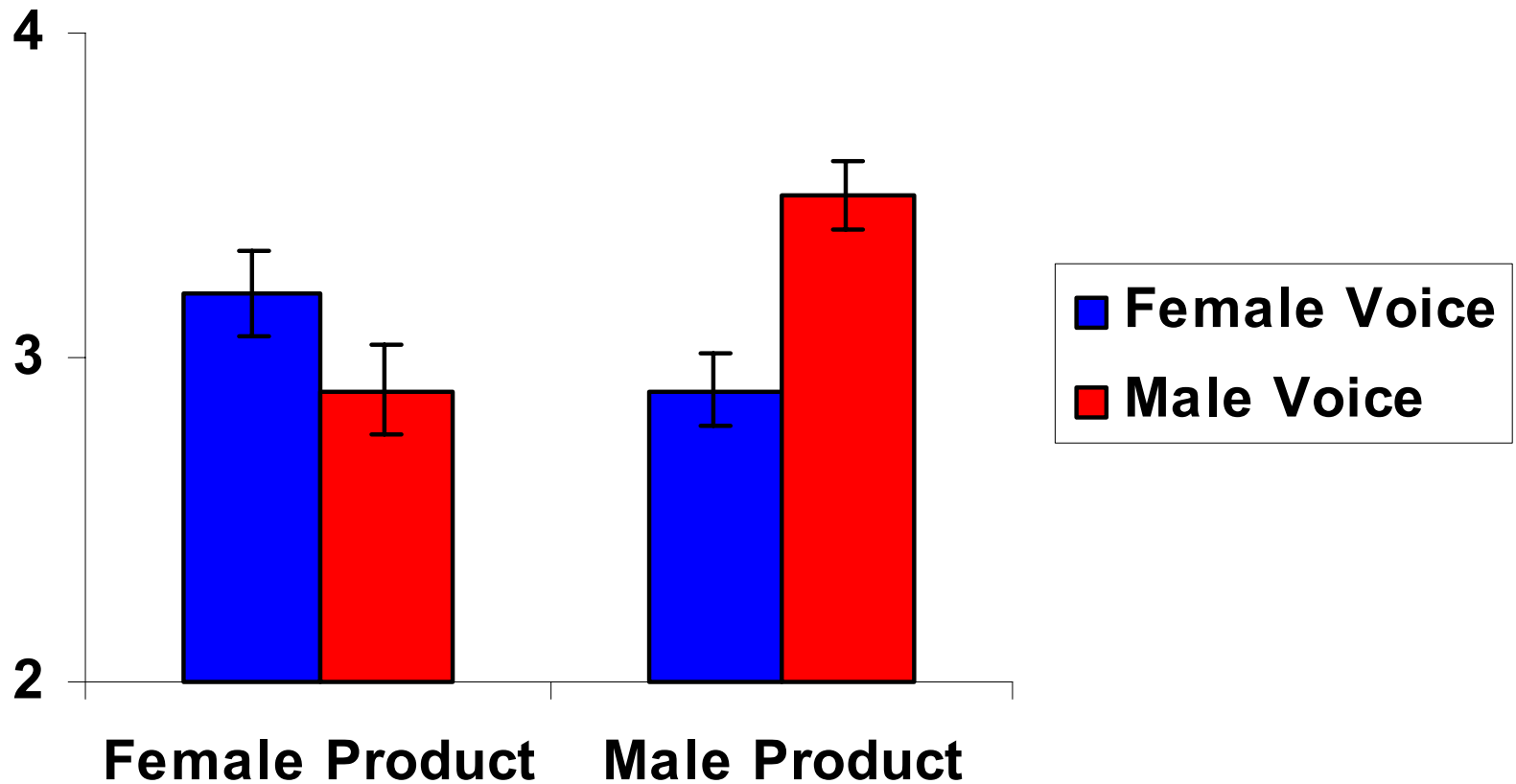
- “Gender” of voice (synthetic)
 - Gender of user
 - “Gender” of product
 - E-Commerce website
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Examples of Pitches

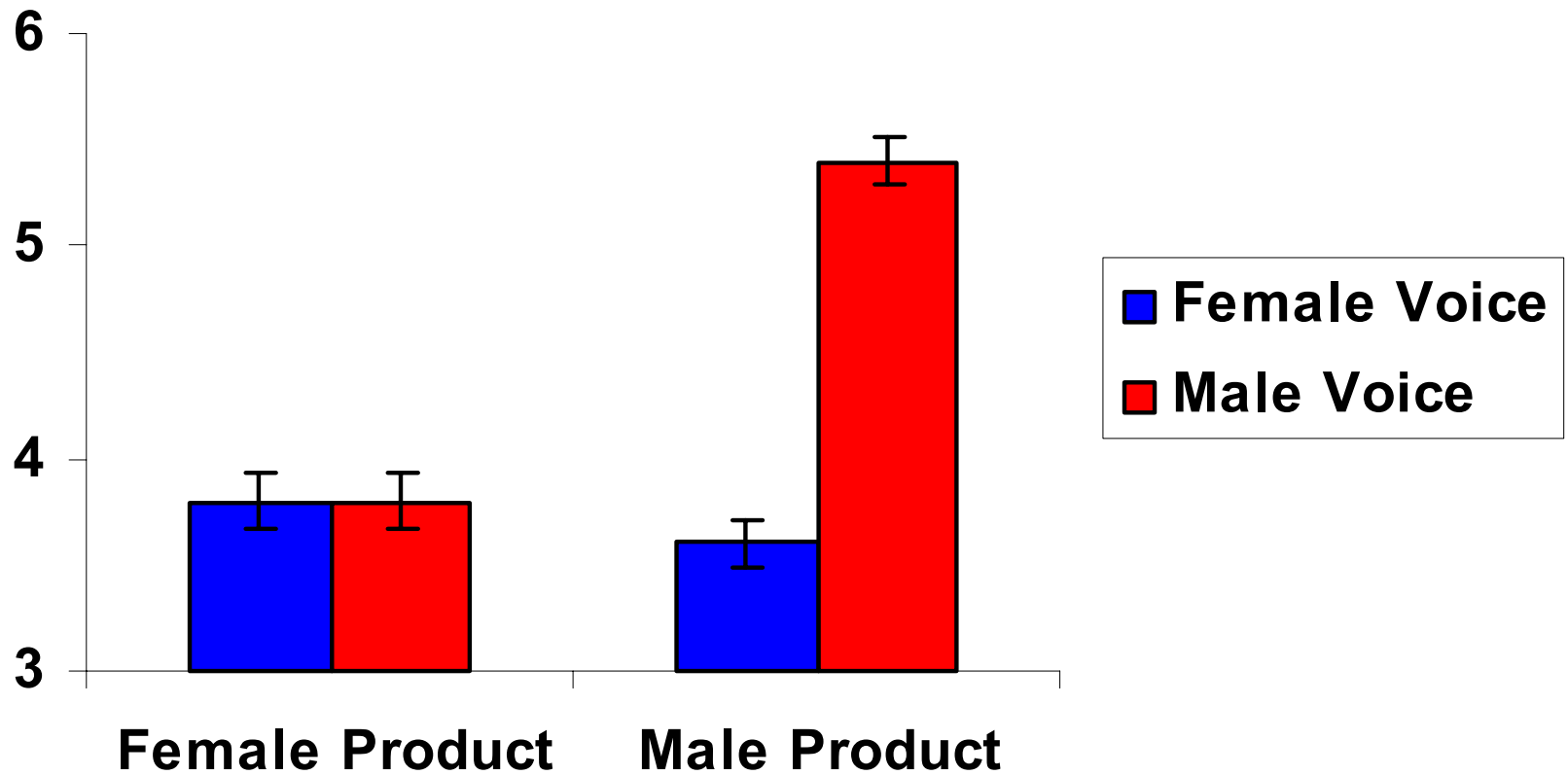
- “Female” voice; female product
- “Male” voice; female product
- “Male” voice; male product



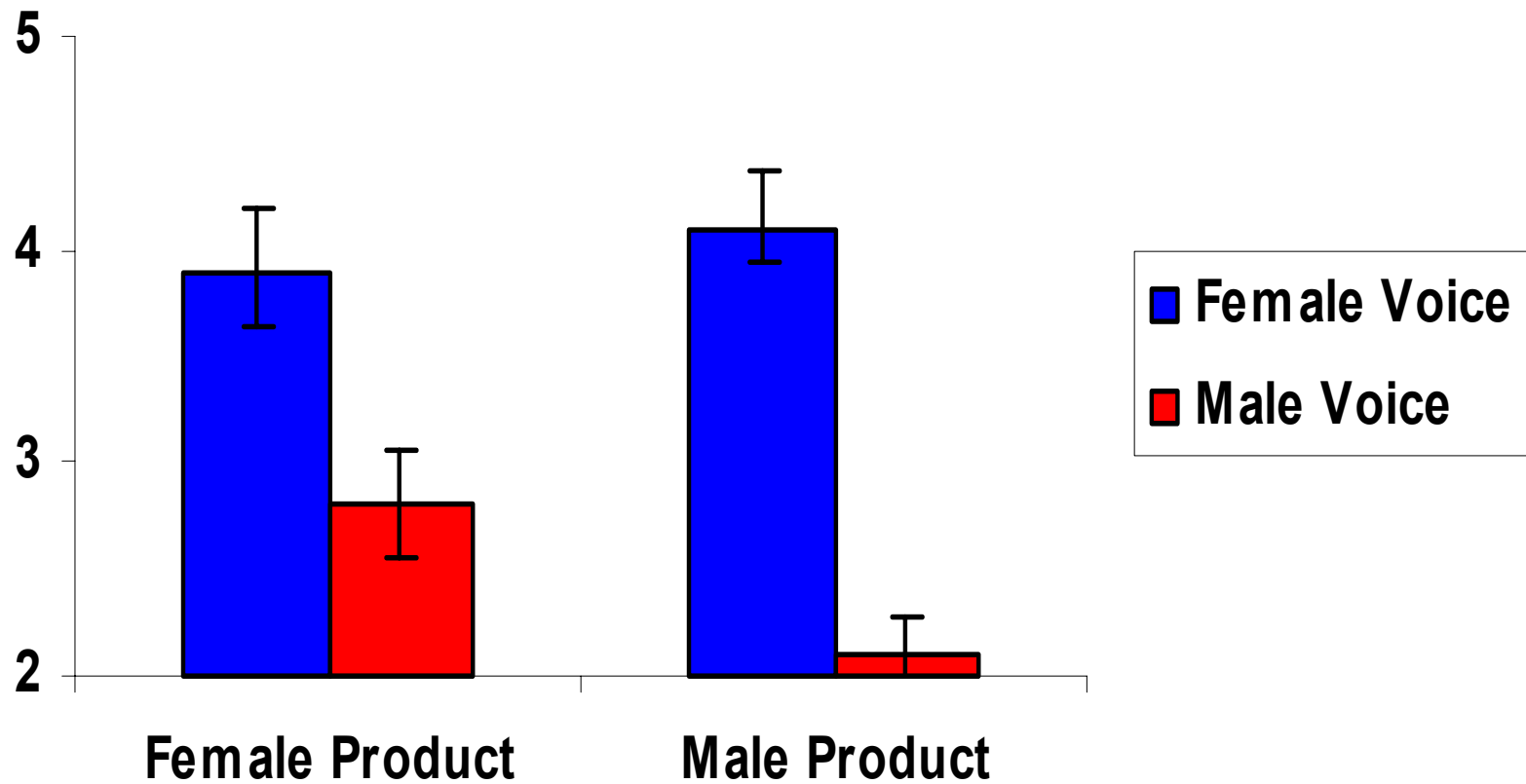
Appropriateness of the Voice



Credibility of the Description



Femininity of the Product

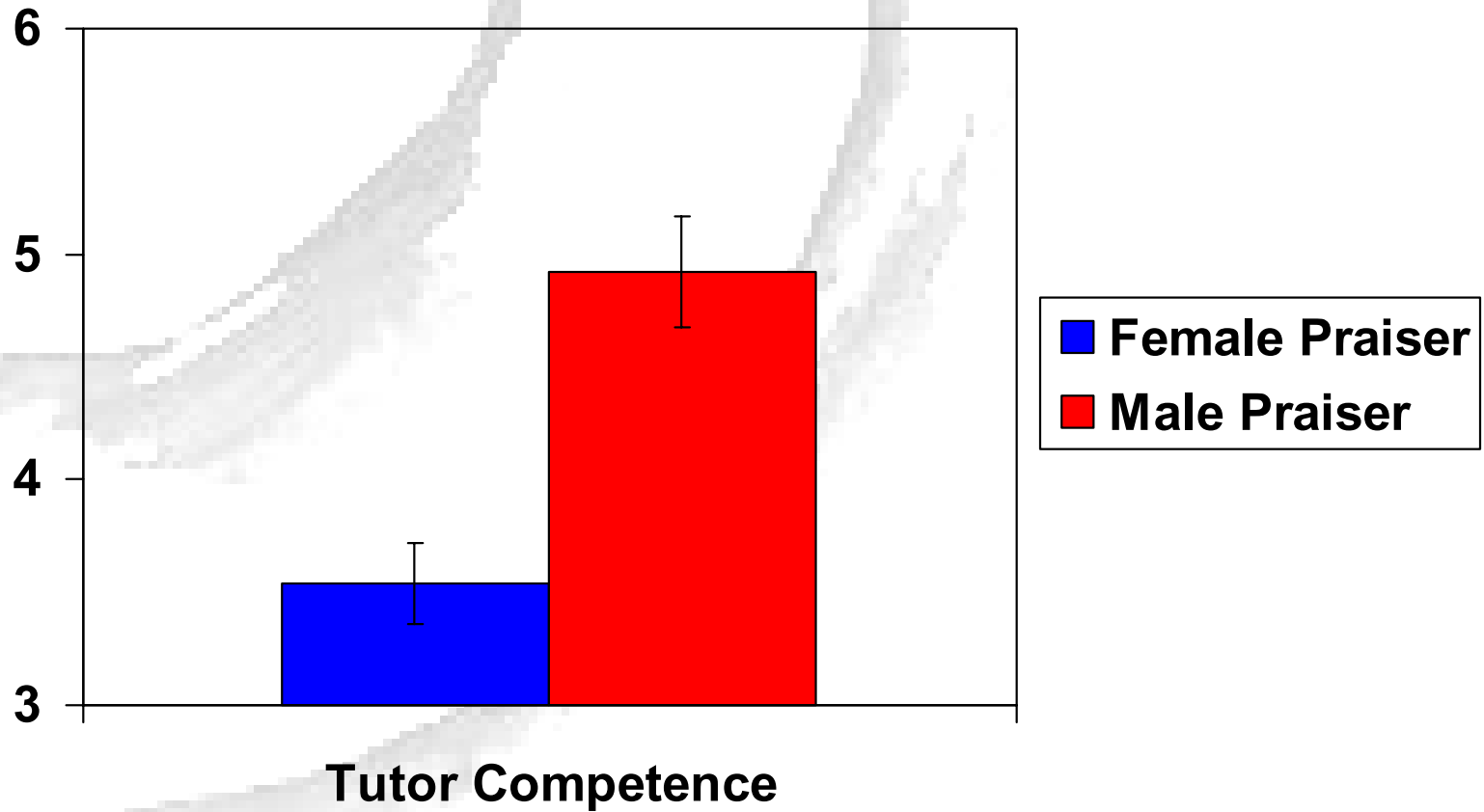


Study 3:

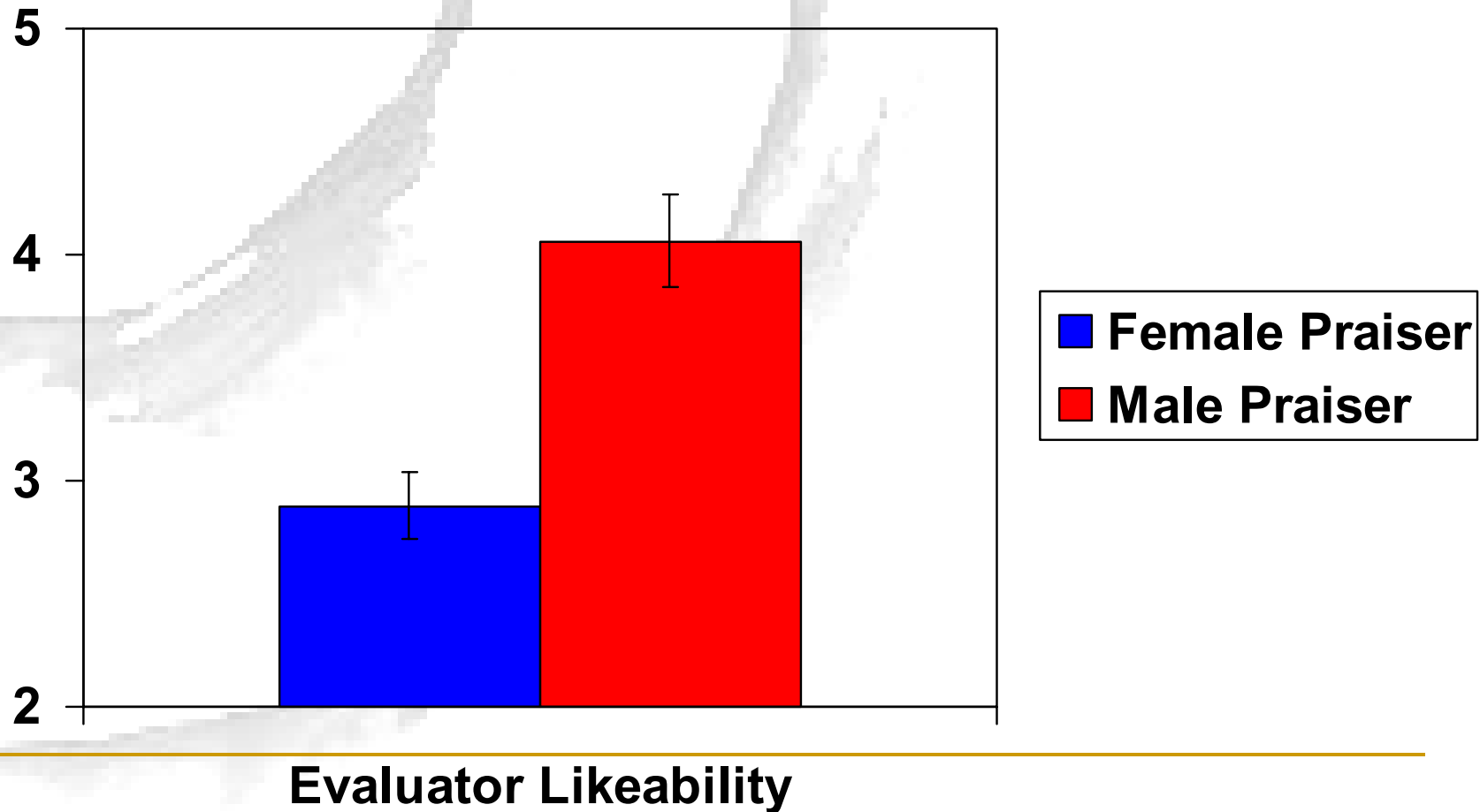
Gender and Teaching

- Gender of teaching computer
 - Gender of computer that praises tutor
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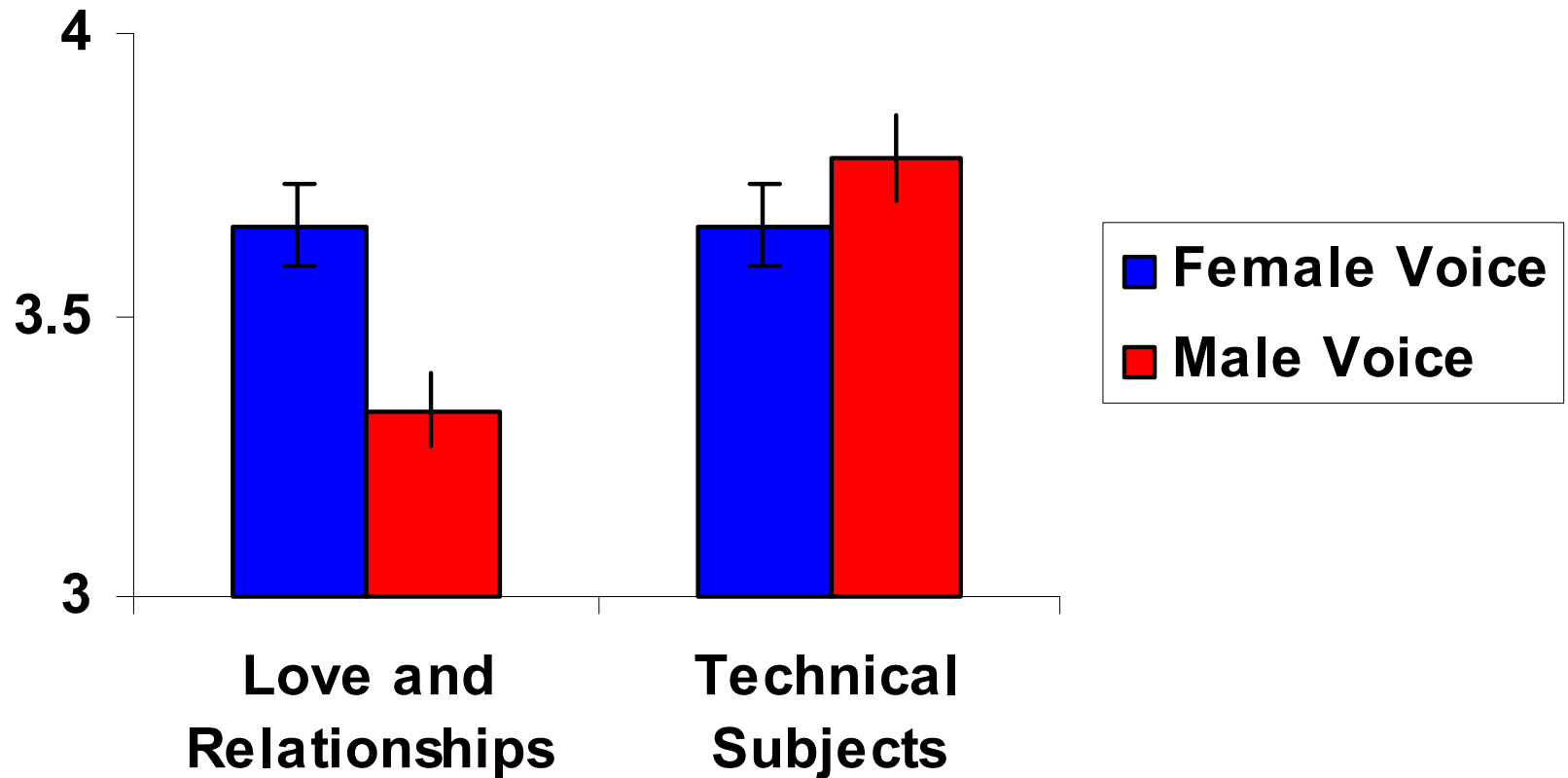
Tutor Competence



Evaluator Likeability



Informativeness of Tutor Computer



Consistent Results

- Participants denied that gender of voice mattered
 - Participants denied social identification
 - Participants denied stereotyping technology
 - Participants denied harboring stereotypes!
 - Summary
 - Assignment of gender is fundamental
 - Assignment of gender is extremely powerful
 - Identification
 - Rich stereotyping
 - Assignment of gender is automatic and unconscious
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Is there a Bright Side? Yes!

- Clever selection of voices can break stereotypes
 - Clever selection of voices can address the pipeline problem
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