

Gender

IIE 366: Developmental
Psychology
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Lecture 31

Gender in the 21st Century

- I. What Do Children Know About Gender?
- II. Gender Differences in Math
- III. Gender-Based Reasoning
- IV. Gender as a Social Category

I. What Do Children Know About Gender?

- A. Beliefs About Social and Biological Aspects
- B. Beliefs About Flexibility

I. A. Beliefs About Social and Biological Aspects

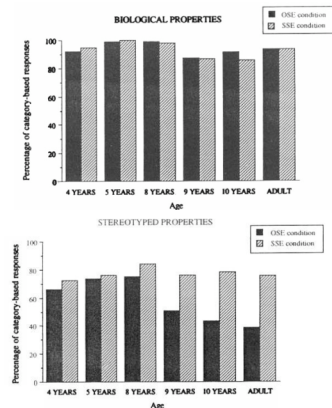
When do children understand the biological and social aspects of gender? When do they understand that some aspects of gender are dictated by circumstance (wears a dress) but others are not (has babies)?

Study by Marianne Taylor

- Children and adults were told about a baby--either a boy or a girl--who went to live on an island where there were exclusively members of the opposite sex or exclusively members of the same sex.
- Then shown a picture of the child, now as a 10-year-old. Reminded of the living circumstances (exclusively same- or opposite sex).

- Asked children and adults gender-related questions about the child on the island.
- Stereotyped: "cries a lot" "likes to play with dolls" "gets into fights a lot" "wants to be a soldier"
- Biological: "has a body like a girl's" "grows up to be a daddy"

- Everyone believes that biological properties are unchanged by this environment
 - Age has little effect
- Belief in stereotyped behavior depends on age



I. B. Beliefs About Flexibility

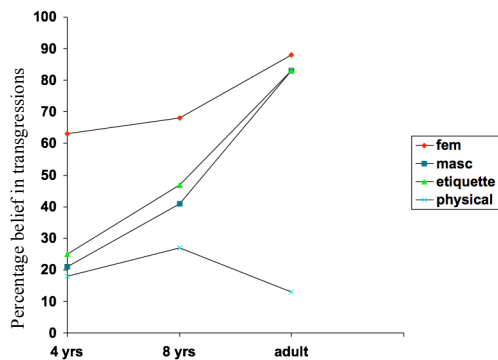
- During childhood, children understand that gender roles are not binding.
- Research demonstrating this usually compares children's responses to gender "transgressions" with other types of transgressions.

Results of Levy et al.

- Asked children and adults questions about gender, etiquette, and physical transgressions.
- "Do you think there might be a country somewhere where...girls play football?"

Types of Transgressions

- Gender: girls play football, boys wear lipstick and necklaces
- Etiquette: eat ice cream with fingers, burp while eating
- Physical: people lay eggs, people float in the air



II. Gender Differences in Math

- Gender differences in both math and spatial ability
- Spatial ability important for some types of math (e.g., geometry)
- Perhaps gender differences in math are due, in part, to gender differences in spatial ability?

Casey et al. study

- Administered mental rotation task and obtain SAT-M scores to 195 women and 79 men at a liberal arts college.

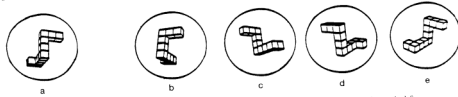


Figure 1. Sample mental rotation figures. Choices a and b are identical (but rotated) to the choice on the left.

- Mental rotation: men 25.76 correct, women 17.53
- SAT-M: men 574, women 547
 - Women's SAT-M scores predicted by mental rotation performance
- Statistically adjusted SAT-M: men 560, women 561

Progress

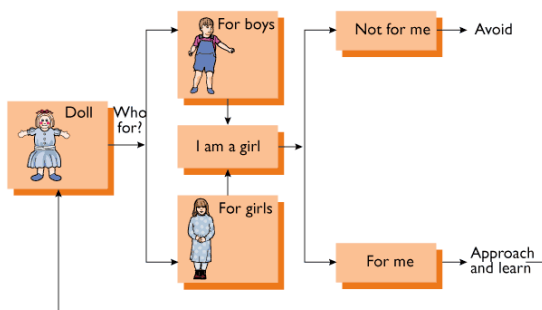
- 20 years ago: girls do well in elementary school but fall behind in high school
 - Parents and teachers think boys are better
 - Girls avoided taking harder math classes
- New data show things are changing
 - Girls make up 48% of math undergraduates (however, there are generally more women undergraduates)
 - 2002: shows no difference between boys and girls on high school standardized tests

Confounds?

- Girls as a group may score lower on SAT-M because more girls take the test than boys
 - Have a wider range of math scores than boys
- For the class of 2007, the latest figures available, boys scored an average of 533 on the math section of the SAT, compared with 499 for girls.
- On the ACT, another test on which girls lag slightly, the gender gap disappeared in Colorado and Illinois once state officials required all students to take the test.
- Changes in students or changes in tests?
 - In most states and at most grade levels, there weren't any questions that involved complex problem-solving, the ability needed to succeed in high levels of science and math.
 - Previous studies suggest that boys are better at complex problem-solving

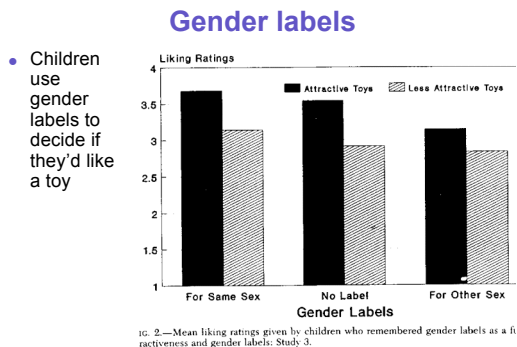
III. Gender-Based Reasoning

- Gender schema for a girl



Martin et al. study

- Preschool children (4- to 6-year-olds) were shown novel toys. Some had previously been judged to be attractive (spinning bells); others had been judged to be less attractive (a shoe shaper).
- Some toys placed in a box labeled "boys"; others in a box labeled "girls", and others in an unlabeled box.
- Children rated how much they liked each toy (on a scale from 1-4).



IV. Gender as a Social Category

- People often use gender as a social category even when it's not relevant (i.e., grouping people by gender when gender has nothing to do with the grouping).
 - "Good morning boys and girls."
- Is this harmless? Or does it affect children?

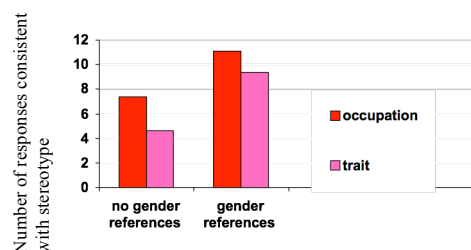


Study by Rebecca Bigler

- Studied 6- to 11-year-olds attending a summer school program. Spent 5 mornings in school for 6 weeks.
- In 2 classrooms, teachers used gender often in categorizing children (gender-based bulletin boards, gender-segregated seating, gender-based comments "All boys should be sitting down" "Jack, be a good helper for the boys.")
- In 2 other classrooms, teachers avoided gender-based comments.

After 4 weeks, the following measures were used:

- Occupational stereotyping: For 25 occupations, asked whether "men" "women" or "men and women" can do these jobs.
- Trait variability: asked whether a trait (e.g., mean, adventurous, gentle, neat) applies to "no" "some" "most" or "all" boys or girls



Changing beliefs

- You can teach children to challenge stereotypes
- Bigler (2005)
 - Private school
 - Kindergarten to 3rd grade students
- Pre-test
 - asked whether they would intervene, or speak up, in response to sexist comments such as, "You can't play house; you're a boy."
 - Everyone said they would not

Changing beliefs

- Split students in to two groups. Both receive lessons on gender
 - Modeling: heard stories about people who had challenged gender stereotypes and learned about the accomplishments of women and men in atypical gender roles
 - Practice: direct instruction about intervening. Students learned when to challenge sexist remarks and exactly what to say
 - » *You can't say that boys [girls] can't play!*
 - » *Not true, gender doesn't limit you!*
 - » *Give it a rest, no group is best!*
 - » *That's weird, being boys and girls doesn't matter here!*
 - » *I disagree! Sexism is silly to me!*
- Control group: students who came to the school after the lessons started

Changing beliefs

- The practice group showed the strongest effect
- Said they would defend a peer being discriminated
- Actually spoke up when testers set up a situation
- Taught the phrases to the children in the other groups
- Teachers picked up on the issues too!

Gender inequality

- While things are much more equal than in the past, there big differences between quality of life for men and women
- This is partially reflected by the *quantity* of life

