

A Self-Sorting Measure of Individual Differences in Very Young Children's Gender Identity

Maya G. Sen, Amanda J. Rosenberg, Erin L. Fettes, & Matthew J. Blazek

Psychology Department, Northern Michigan University, Marquette, MI, 49855

Background

- **Self-identification by Sex (SIS)**
 - Ability to identify oneself as a girl or boy (a.k.a., 'gender identity')
 - Why is it important?
 - An early gender milestone
 - Related to sense of self
 - May be a catalyst for gaining further gender knowledge (Martin, Ruble, & Szkrybalo, 2002)
 - Identifying self as a girl or boy should motivate you to learn more about what is deemed appropriate for a girl or boy
 - If it is a catalyst, important to find onset
 - Changes may occur simultaneously or after a delay
 - Past research findings:
 - Strong evidence of SIS at 30 months
 - Mixed evidence of SIS at 24 months
 - Likely due to methodological problems: Current methods are not engaging enough and are not developmentally appropriate for children 24 months and younger
 - Solution: A self-sorting measure – The Wall
 - Adapted sorting task that has children sort themselves instead of using pictures or dolls
 - Eliminates problems associated with dual representation when very young children try to sort a picture of themselves as "me" and also as a girl or boy
- **Gender Salience (GS)**
 - Children vary in the degree of importance and the amount of attention that they give to gender.
 - These individual differences have been found to be related to differences in the amount of knowledge a child has about gender (e.g., Levy & Carter, 1989).
 - Therefore, children who identify themselves by sex should show higher levels of GS.

Acknowledgements

Thank you to Megan Johnson for her help, and to the NMU Psychology Department for their support. Funded by: NICHD R03-HD047410 <http://genderlab.nmu.edu/>

Participants

- Participants:
 - 27 children were tested: M_{age} = 27 months, 12 days; Females = 12
 - Range = 23 months, 15 days – 30 months, 16 days

Self-identification by Sex

- Methods**
- The Wall (52" x 65") consisted of two tunnels (24" x 17"). There were six puzzle pieces, 3 each with female and male pictures, which were placed around each tunnel entrance (Figure 1).
 - Parent stands centered behind The Wall.
 - Child helps place puzzle pieces; the side the female and male pictures on is counterbalanced.
 - Child is shown 6 dolls (Female = 3). 1 female & 1 male doll are sorted by sex. The child is asked to sort the four remaining dolls.
 - Child is placed 48" away from The Wall. Parent calls to the child to crawl through a tunnel towards the parent. Child repeats this two more times.
 - One variable was calculated
 - *Self-Identification (SI)* = the percent of trials in which the child crawled through the tunnel that matched their own sex

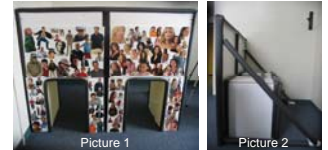


Figure 1: The Wall and Tunnels. Picture 1 – The front view (puzzle pieces) Picture 2 – The back view of the tunnels.

- Results**
- An Independent Samples t-test was performed to compare females' and males' Self-Identification.
 - No sex differences, $t(25) = 0.581, p = 0.566$.
 - Percent correct ($M = 53.0\%, SD = 41.6$) was not significantly different from chance (50%), $t(26) = 0.385, p = 0.703$.
 - As a group, children showed no evidence of SIS.

Gender Salience

- Methods**
- Apparatus: an Elo 1525L touch screen monitor, computer, and DirectRT software.
 - The child is placed in a high chair within touching distance from the computer monitor (Figure 2).
 - Two toys at a time, a pair (Figure 3), appear on the computer monitor (N = 15); (Warm up = 6; Female/Female pairs = 3; Male/Male pairs = 3; Female/Male pairs = 3).
 - Child touches the picture of the toy they want, & is presented with that toy. Continues for all pairs.
 - The toy choice and toy selection time (in milliseconds) are recorded by DirectRT.
 - Three variables were calculated
 - *Inhibited Feminine Reaction Time* (InFemRT) = standardized RT for Inhibited Feminine trials
 - *Inhibited Masculine Reaction Time* (InMascRT) = standardized RT for Inhibited Masculine trials
 - *Facilitated Reaction Time* (FacRT) = standardized RT for Facilitated trials



Figure 2: Gender Salience Task set-up

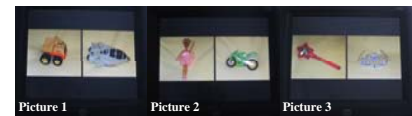


Figure 3: Three pairs of pictures used for the Gender Salience Task. Picture 1 – Inhibited masculine toy choice Picture 2 – Facilitated toy choice Picture 3 – Inhibited feminine toy choice

- Results**
- To determine whether performance on the SIS task was related to differences in the GS task, correlations were calculated among all five dependent variables.

Correlations

- Girls and boys were analyzed separately because they may respond differently to the tasks of choosing between two feminine toys or two masculine toys.
 - None of the correlations was significant at the $p < 0.05$ level, however several trends were apparent.
- Girls
 - SI & InMascRT: $r(10) = -0.576, p = 0.05$
 - SI & FacRT: $r(10) = 0.500, p = 0.098$
- Boys
 - SI & InFemRT: $r(13) = -0.412, p = 0.127$
 - SI & InMascRT: $r(13) = 0.433, p = 0.107$

Discussion

- Children did not consistently choose the correct tunnel, thus showing no evidence of SIS in 27-month-olds as a group.
- We did find individual differences. Children with high SI scores showed trends towards performing differently on the GS task than those with low SI scores. The pattern was different for girls & boys.
- Girls showing evidence of SIS took longer to choose between feminine (F) & masculine (M) toys, & chose between two M toys more quickly.
- Boys showing evidence of SIS took longer to choose between two M toys, & chose between two F toys more quickly.
- This is the opposite of what we expected – choosing between an F & an M toy should be easier for children with high levels of GS than choosing between two F or 2 M toys. In fact, previous research with older children showed this pattern (e.g., Levy & Carter, 1989).
- However, it is possible that when younger children are faced with two toys they do not want, they choose more quickly in order to move on to the next set of toys.
- Thus, 27 months may be an age when children are just acquiring SIS. Further testing with more participants will provide stronger evidence. We will also test older children to ensure that they are able to 'pass' The Wall task.