“You’re not a boy or a girl”: Children’s predictions about perceptually gender ambiguous people

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Introduction

By preschool age, children make assumptions about others based on gender category membership (e.g., Gelman, Collman, & Maccoby, 1986). This is particularly strong at around 5 years of age and begins to dissipate as children enter middle childhood (e.g., Martin, 1989). In the case of people who are perceived as gender ambiguous (i.e., someone who does not look like a boy or a girl), there is a lack category-specific information, rendering category-based assumptions ineffective. Surprisingly, perceptual gender ambiguity has not been examined extensively in the developmental literature, despite calls to investigate individuals who exist outside of strict social categories (e.g., Dunham & Olson, 2016).

Just as children use gender categories to make predictions about other people, 5-year-olds can also use other information, such as trait information, to guide their predictions about others (e.g., Diesendruck & haLevi, 2006). In fact, they prioritize trait information over social category information (Diesendruck & haLevi, 2006). Moreover, even 3-year-olds prioritize trait information over appearance information (e.g., Heyman & Gelman, 2000).

We investigated whether 5- to 8-year-olds use trait information or appearance information to guide their decisions about perceptually gender ambiguous people. Children were asked if a perceptually gender ambiguous target preferred the same novel activities as someone with appearance (i.e., gender ambiguous) or trait similarities. We expected participants to match the target with the gender-stereotypical character, given that preschoolers prioritize trait similarities over appearance and social category similarities. For exploratory purposes, we asked children to provide justification for their responses to determine if patterns emerged in their explanations.

Method

One hundred six 5- to 8-year-olds (53 5- and 6-year-olds, 53 7- and 8-year-olds) were shown three characters: a perceptually gender ambiguous target, a perceptually gender ambiguous character, and a character of gender-stereotypical appearance matched to the participant’s gender. The target and gender-stereotypical character shared trait similarities, but the target and perceptually gender ambiguous character shared appearance similarities.

Participants were asked if the target preferred the same novel activities as the gender-stereotypical character (trait match) or perceptually gender ambiguous character (appearance match). Participants received a score of 0 (appearance match) or 1 (trait match).

Participants were then asked to justify their decision (i.e., “Why?”) to match the target with the trait or appearance match. This was an open-ended question. Answers were coded in the following way: 0 = appearance-based or irrelevant and 1 = trait match. Appearance-based justifications included aspects of the characters’ physicality (e.g., “Because we’re not sure if they’re a boy or a girl,” “Because they look like sisters,” “They look like they’re gonna be really good friends,” etc.). Irrelevant justifications predominantly included “I don’t know” or responses about liking the novel activity (e.g., “Because they love to play jimjam”). Trait-based justifications made explicit connection to the target’s trait (e.g., “Because they’re both shy,” “I just think since they’re both creative, they would both like to play tibbits”). Cohen’s Kappa was .971, demonstrating strong agreement between raters for this question.

Figure 1. Example stimuli, including a sample vignette. Trait information was shared between the target and gender-stereotypical character and appearance information was shared between the target and perceptually gender ambiguous character.

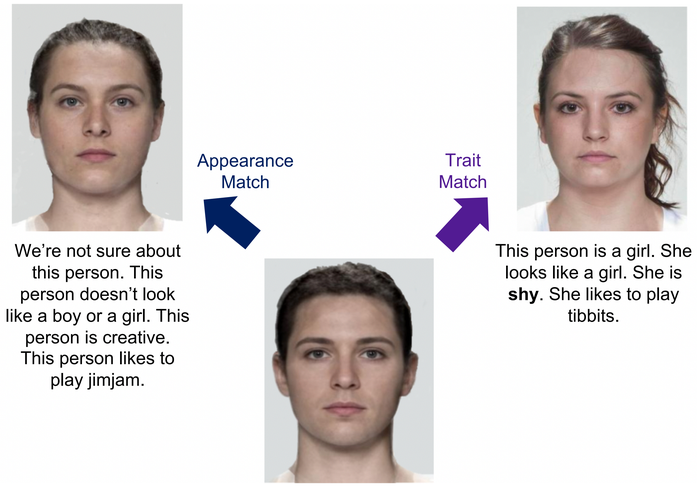
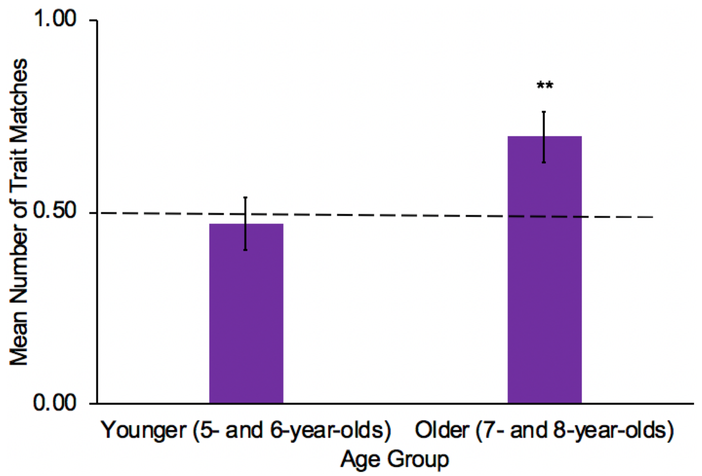


Figure 2. Mean number of trait matches by age group. Participants received a score of 0 for appearance matches and a score of 1 for trait matches. Scores ranged from 0 – 1. Error bars represent standard errors. ** indicates significance against chance, p ≤ .01.



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Results

A chi square test for independence revealed that trait matches differed by age, $\chi(1) = 5.595$, $p = .018$. Younger children performed at chance, $t(52) = -.409$, $p = 684$. Older children made more trait matches than expected by chance, $t(53) = 3.112$, $p = .003$.

A second chi square test for independence indicated that children’s justifications for their answers did not significantly change with age, $\chi(1) = 2.910$, $p = .088$. Younger children ($M = .1321$, $SD = .3418$) performed below chance, $t(52) = -7.836$, $p < .001$, as did older children ($M = .2642$, $SD = .4451$), $t(52) = -3.858$, $p < .001$. Only 13.2% of younger children and 26.4% of older children used trait justifications for their matching decisions. Children who did not provide trait justifications did not necessarily provide appearance-based justifications. Rather, they tended to respond with irrelevant information, predominantly with “I don’t know” or information about liking for the novel activity (“Because they love to play jimjam,” “Because they like it,” “Because he likes playing tibbits,” etc.).

Discussion

Children’s trait matches increased with age. Five- and 6-year-olds were as likely to use trait or appearance information to decide the target’s novel activity preferences. By contrast, 7- and 8-year-olds relied on trait over appearance information. Older children’s sophisticated reasoning coincides with the idea that children’s understanding of traits continues to develop into middle childhood (e.g., Gonzalez, Zosuls, & Ruble, 2010). Although some findings suggest that trait-based reasoning appears by 3 years of age (e.g., Heyman & Gelman, 2000), other research shows that young children sometimes prioritize appearance over other forms of information (e.g., behavioral information) when making predictions about others (Hoffner & Cantor, 1985). Therefore, perhaps younger children’s usual abilities were challenged in the context of perceptual gender ambiguity. The perceptual novelty of gender ambiguity might have led younger children to place value on appearance information more than they would have in a context with characters of traditional gendered appearance.

Additionally, verbal limitations might account for why older children’s justifications did not parallel their trait-based predictions for the target. It is possible that older children knew to use the target’s trait information to inform novel activity predictions, yet were unable to simultaneously explain *why* those trait-based decisions were made. Past studies that incorporated the same paradigm (e.g., Diesendruck & haLevi, 2006) did not ask children to provide justifications for their choices, perhaps also due to children’s developing verbal abilities. For future studies, a forced-choice question might minimize verbal requirements and lead children to demonstrate more trait or appearance-based justifications (e.g., for a trait match: “Does this person like to play ___, like this person, because they’re both shy/creative?” or for an appearance match: “Does this person like to play ___,like this person, because they look alike?”).

Overall, the present findings suggest that perceptual gender ambiguity introduces a novel context that is impactful to children’s inferences about others, despite little consideration for perceptual gender ambiguity in the past. Hence, it is critical to continue to investigate how children reason about people who exist outside of strictly defined social categories. Otherwise, current theories about children’s social judgments remain only applicable to strict, rather than fully representative, definitions of social categories.

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