Identification of Ambiguous Pronouns during Narrative Comprehension by Older Autistic Children

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Introduction

- **Autistic children use ambiguous pronouns** in narratives more often than non-autistic peers (Novogrodsky, 2013; Novogrodsky & Edelson, 2016)
  - E.g., using "he" when there are competing referents
- Unclear origin of this expressive difference
- **No existing research on recognition of ambiguous pronouns** in others' narratives

Research Question

- Do autistic children **recognize when others use pronouns ambiguously**?

Hypotheses

1. **Accurately identifying ambiguity correlates with language ability** in both groups
2. **Autistic children will identify ambiguity less often** than non-autistic peers, regardless of language skills

Participants

Group	Age (p = 0.40)	Sex (p = 1.0)	Language (p = 0.75)	IQ (p = 0.95)
ASD N= 16	13;7	4:14 (F:M)	104	109
NT N= 18	14;1	4:14	105	109

WORKS CITED

Novogrodsky, R. (2013). Subject pronoun use by children with autism spectrum disorders (ASD). https://doi.org/10.3109/02699206.2012.742567

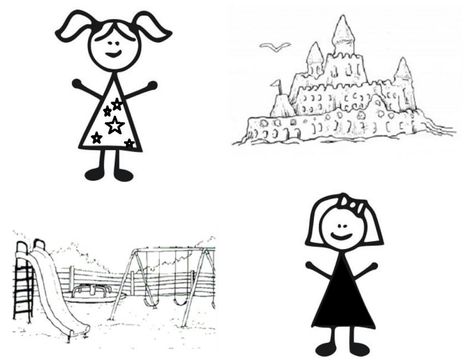
Novogrodsky, R., & Edelson, L. R. (2016). Ambiguous pronoun use in narratives of children with Autism Spectrum Disorders. *Child Language Teaching and Therapy*, *32*(2). https://doi.org/10.1177/0265659015602935

METHODS

PROCEDURE

- Children listened to 50 4-sentence-stories while looking at illustrations
- Stories involved 2 female characters and the pronoun *she*
- In 20% of stories, *she* was ambiguous (unresolved by syntax or context)
- After each story, children answered a multiple-choice question about the reference for *she*
- Eye-tracking recorded (data not presented here)

Example Visual Scene



Example Ambiguous Item

1. *Cassie and Julia are at the playground*
2. *They're playing in a sandbox*
3. *While they build a sandcastle, she sings a song*
4. *It's a beautiful day*

Who sang a song?

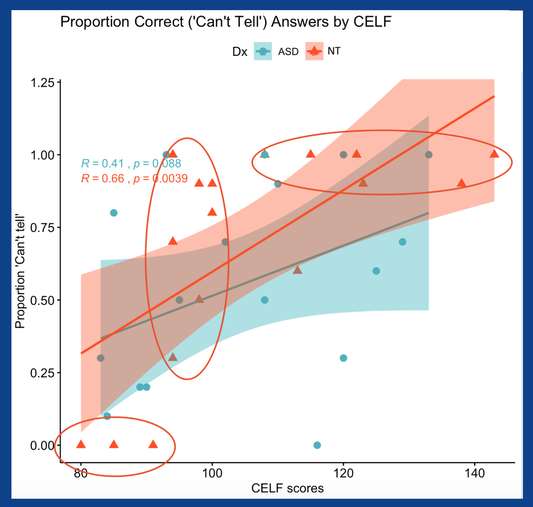
a. *Julia*
b. *Cassie*
c. *I can't tell*

Analysis

- Participants' answers for ambiguous contexts categorized:
  1. Acknowledges ambiguity: *selects "I can't tell"* ≥ 80% (correct response)
  2. Doesn't acknowledge ambiguity: guesses: *Julia or Cassie* ≥ 80%
  3. Mixed responders: *I can't tell* > 20% *and* < 80%
- Language scores and participant group (Aut. or Non-Aut.) as predictors for categorization in multinomial logistic regression

RESULTS

Language Scores by Accuracy



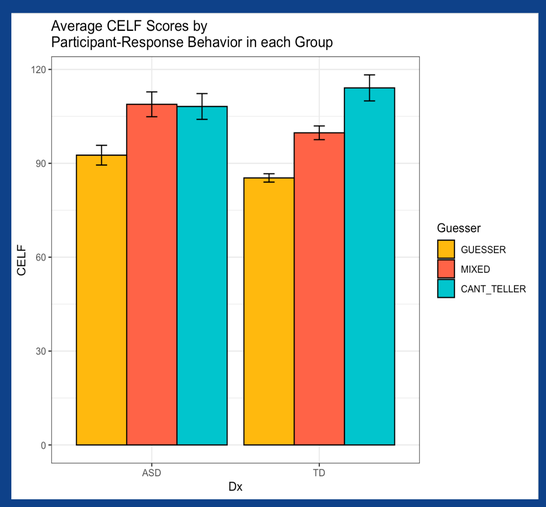
Language Scores:
1. Predict response accuracy ($p < 0.01$)
2. Correlated with response accuracy in non-autistic children ($p < 0.01$)
3. Show 3 clusters of participant behavior in non-autistic group (see circles and second graph)

Response Behavior in Each Group

- Non-autistic group shows bimodal distribution, autism group does not
- More mixed responders in autism group

Scan for Paper!

Language Scores by Response Behavior



Participant Response Behavior is:
1. Predicted by CELF scores ($p < 0.001$)
2. Predicted by Participant Group ($p < 0.01$)
3. Predicted by the interaction of CELF score and Group ($p < 0.01$)

Conclusions

- Non-autistic children with lower language scores select a referent in ambiguous contexts; those with higher language scores indicate they recognize ambiguity by selecting "I can't tell"
- Some autistic participants with high language scores repeatedly identify a referent for ambiguous pronouns
- Results suggest that - despite strong language skills - **some autistic children either**
  - **Are not aware of ambiguity**

    or
  - **Do not feel confident acknowledging they can't identify a referent**, even in a multiple-choice task where "I can't tell" is a valid response choice

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