

# Distinctive Features of Pragmatic Expression in Adults with ASD

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## BACKGROUND

- Adults with ASD face **difficulties in pragmatic expression**.
- This leads to **difficulties in other areas of life** such as employment, relationships, and achieving independence.
- Pragmatics expression in discourse of children with ASD is well-studied, but **little research on adults with ASD**.
- Collaborative discourse** especially important for maintaining personal and working relationships.

## OBJECTIVES

- Identify **distinctive pragmatic features** of ASD in adults.
- Explore how neurotypical interlocutors **adapt their own pragmatic expression** in conversations with adults with ASD.
- Focus on **3 pragmatic features** in collaborative discourse:
  - **politeness**
  - **informativeness**
  - **certainty**
- Compare the expression of these features in:
  - **Experimental participants (EP)** with/without ASD
  - **Neurotypical conversational partners (CP)** speaking to EPs with/without ASD

## PARTICIPANTS

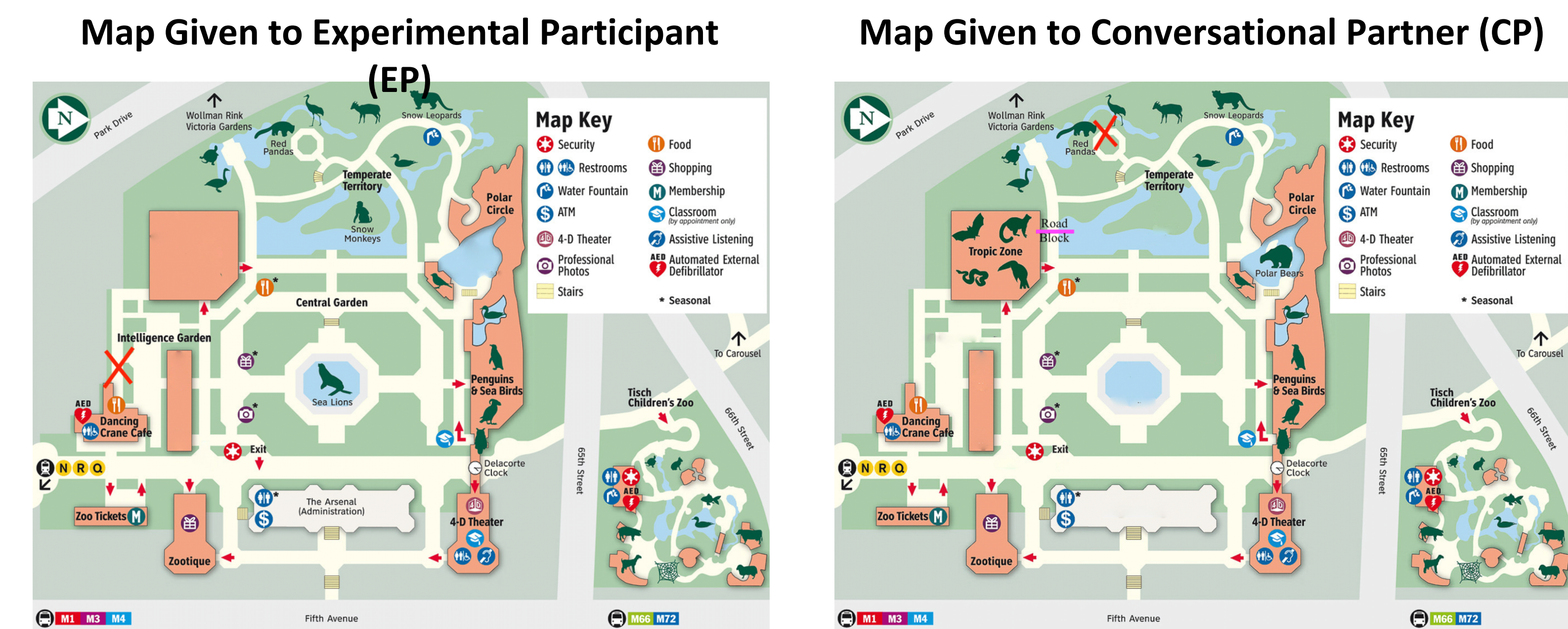
### Eligibility Criteria

- Met criteria on ADOS
- PIQ > 80, VIQ > 80
- Age > 18 years
- No history of speech, language, hearing difficulty
- Monolingual American English speaker

Diagnosis	PIQ	Age
TD (n=8)	103 (10.5)	22y5m (4y3m)
ASD (n=14)	106 (8,.4)	18y11m (1y9m)
CP (all TD, n=11)	N/A	18-25y

## METHODS

### Collaborative Map Task



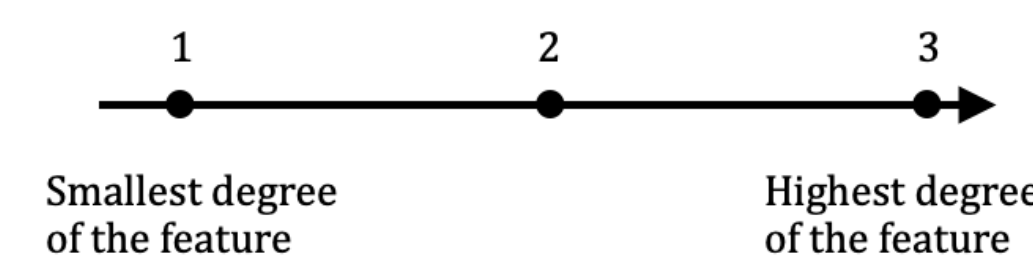
- Each map has **slight differences** in landmarks, labels, and obstacles.
- EP must explain to CP how to get to their indicated position on map.
- Conversations are **recorded and manually transcribed** using Praat.

### Dialogue Corpus

# ASD utterances	# TD utterances	# Total utterances
5,742	3,525	9,267

### Linguistic Annotation

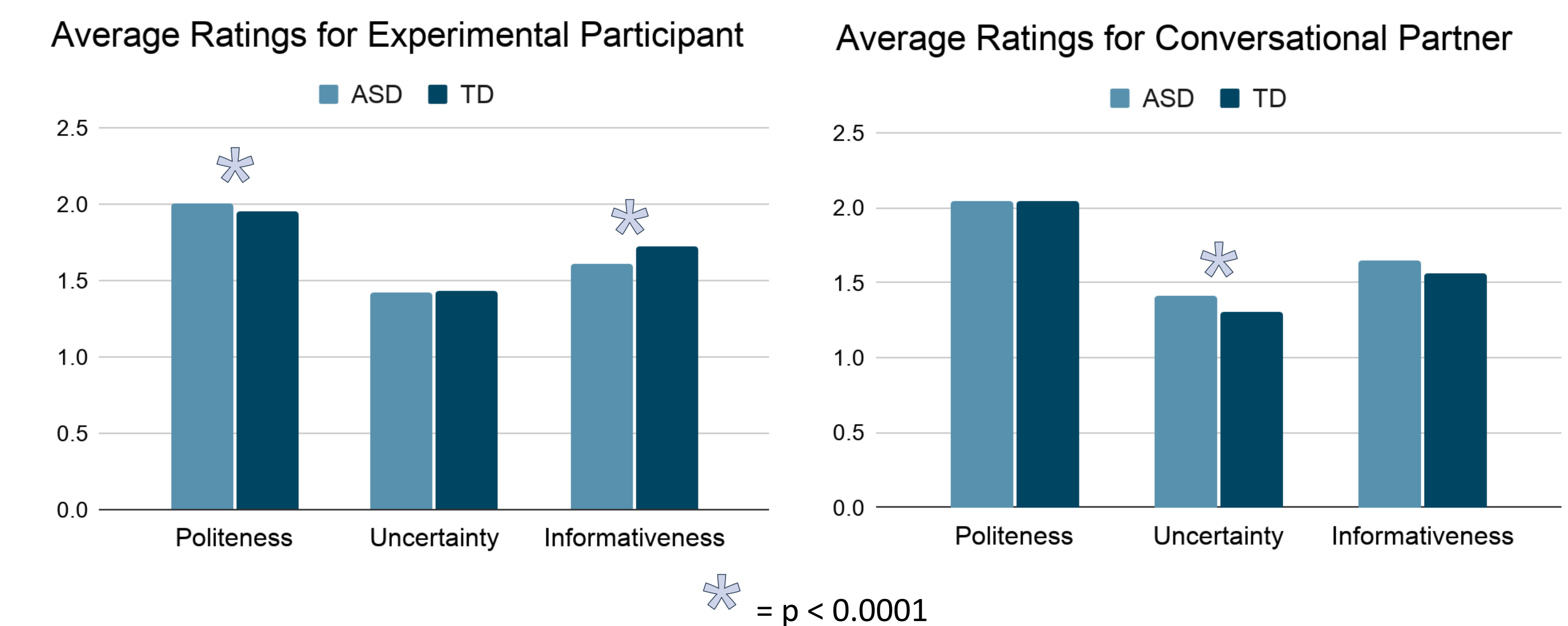
- Transcripts are annotated by 2 out of 3 possible annotators for **politeness** (Krippendorff's  $\alpha=0.57$ ), **uncertainty** ( $\alpha=0.90$ ), and **informativeness** ( $\alpha=0.75$ ) on a categorical scale of 1 to 3.



### Example Sentences

Utterance	P	U	I
How the heck am I supposed to say this?	1	1	1
It's near the Irrigation Pond.	2	1	3
Okay so we're going to have to go down one block.	3	1	2
Are you just past the City Tavern?	2	2	3
I don't think I do.	2	2	1
Can you describe where you're at?	2	3	1
I'm between those two.	2	1	1
Yeah it is by some trees.	2	1	2

## RESULTS



- Experimental participants with ASD** were significantly **more polite** ( $p=1.362E5$ ) and **less informative** ( $p=1.2263E4$ ) on average
- Conversational partners** exhibited significantly **more uncertainty** ( $p=1.59E6$ ) when talking to ASD participants
- Greater uncertainty** in the dialogue appears to correspond to a **longer time** to task completion ( $r=-0.371$ )
- Greater informativeness** in the dialogue appears to correspond to a **shorter time** to task completion ( $r=-0.318$ )

## CONCLUSIONS

- Adults with ASD exhibited **observable pragmatic patterns** which were significantly distinct from their TD peers
- These patterns also **influence the pragmatic expression of the CP**, as well as **extrinsic measures of task success**
- The results provide insight into how **language differences** in children with ASD might **manifest in adulthood**
- This study can aid clinicians studying to **improve personal and professional outcomes** for adults with ASD

## ACKNOWLEDGEMENTS

We thank the participants and their families for engaging with our research. This research was supported by the National Institute of Deafness and Communication Disorders of the National Institutes of Health under award number R21DC017000. The content is solely the responsibility of the authors and does not necessarily represent the official views of NIH.