Pragmatic Inferences in Definite and Indefinite Contexts
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Introduction
Speakers use definite determiners (e.g., the) to refer to specific, unique, or established discourse referents and indefinite determiners (e.g., a/an) to refer to non-specific or introduce new referents.

Children have a foundational understanding of determiners and use them appropriately in many situations as young as 2.5-years-old (De Cat, 2009; 2011). However, children have difficulty inferring the intended referents of indefinite determiners even if they understand that Give me the ball requests a specific ball, while Give me a ball requests any ball from a larger set.

Adults will be able to interpret definites and will select the unique item when request used the definite determiner. If adults cannot, they will pick a non-unique item when request is made with indefinite.

What about adults?
It’s assumed adults are capable of inferring the correct referent of indefinites and do so readily. This is in part because adults reason pragmatically about other scalar contrasts, e.g., some vs all (Huang & Srinivasan, 2005; Novick, 2011). However, there is little experimental data to support this, and the previous work that does include adults is mixed, with some suggesting adults do make inferences (e.g., Schaeffer & Matthews, 2005) and others suggesting no (e.g., Horst et al., 2006).

Present Study
Our approach: Present a set of novel objects (3 “non-unique” items and 1 “unique” item) and request participant give us an item using either indefinite or definite determiner.

Predictions:
1) If adults can infer referents of indefinites, they will pick a non-unique item when request is made with indefinite.
2) If adults cannot, they will either select the unique item or select items at chance in indefinite context.
3) Adults will be able to interpret definites and will select the unique item when request used the definite.

Participants
Study 1: 123 mTurkers
Study 2: 44 mTurkers
Study 3: 55 mTurkers
Study 4: 72 mTurkers

Method
Stimuli
Novel objects and names taken from Novel Objects and Unusual Name (NOUN) database (Huang & Srinivasan, in press).

Sample set of novel items
Non-unique items
Unique Item

Variations in tasks
Study 1
“Click on the/a toma”

Study 2
“Give me the/a toma.”

Study 3
“Give me the/a toma.”

Study 4
“Give me the/a toma.”

Results
Definite versus indefinite:
Definite contexts:
Study 1: between-subjects
Study 2–4: within-subjects

Word extension (WE) versus mutual exclusivity (ME):
Character requests an item (e.g., toma)
WE: Asked to pick same item kind that was requested (e.g., which one is a toma?)
ME: Asked to pick different item kind than was requested (e.g., which one is a blap?)
Study 4 only: between-subjects

Participants introduced to a boy and a girl playing.

Study 3:
[Infinitive forms and names were also used to introduce new items into discourse regardless of uniqueness. Introduced items prior to request to remove this interpretation]

“Here are two objects here, but I want the/a toma. Click on the/a toma.”

Stimuli
Study 4:
(Adapted methodology from Karmiloff-Smith (1979) to provide clearer environment for pragmatic inference. Also added WE versus ME conditions (see “Conditions”))

Participants introduced to a boy and a girl playing.
Novel objects introduced in bag as in Study 3.
A teacher asks, “Can you give me the/a toma?” Participants are told to think carefully about whether the teacher is talking to the boy or to the girl, and what a toma is.

“Okay, so now you know what a toma is. Here are two more toys. Which one do you think is a toma/blap?”

Discussion
1) Adults consistently selected the unique object in definite contexts across all four studies.
2) They generally did not infer the intended referent of an indefinite as reflected by their failure to select non-unique items in most indefinite contexts.
3) Adults made the correct inference in the indefinite context only when 1) explicitly encouraged to reason about the intended referent and 2) when the speaker’s choice of determiner is highlighted by contrasting options.

Takeaway point:
Failures to make inferences about definiteness do not necessarily reflect pragmatic incompetence. Adults are prone to error, too.

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