

Romanian children are not able not to derive actuality entailments

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Abstract

Actuality entailments (AEs) are inferences from ability readings (“X could/was able to do Y”) to implicative readings (“X did Y”). They have been considered semantic inferences (Mari, Martin, 2007), arising from the speaker’s presupposition, or pragmatic implicatures (Bhatt 1999, Hacquard 2020) interacting with aspect. We investigate experimentally AEs and (double) negation in child Romanian. Like adults, Romanian 5-year-olds derive AEs with affirmative *Minnie a putut să coacă o pizza* “Minnie was able to bake a pizza”, which suggests AEs are semantic in nature or pragmatic implicatures different from “some, not all”. Unlike adults, children derive few AEs with double negation in *Minnie nu a putut să nu coacă o pizza* “Minnie was not able not to bake a pizza”.

Keywords: first language, actuality entailments, implicatures, negation, DN

Introduction

Actuality entailments (AEs) are inferences from “X could/was able to do Y” to “X did Y”. A sentence such as *Minnie could make a cake* is ambiguous in English between (i) an ability reading (“She was able to”), and (ii) an implicative reading (“She actually did it”). Such readings have been considered either (a) semantic interpretations (Mari, Martin 2007, Mari 2015), arising from the speaker’s presupposition, or (b) pragmatic interpretations/implicatures (Bhatt 1999; Hacquard 2020), arising from the interaction with aspect (i.e., AEs arise only with perfective aspect in Romance). In the current paper, we examine AEs in child and adult Romanian, where AEs have not been investigated. We look at how children interpret sentences containing a main verb such as *a putea* ‘can’ followed by another predicate, when in interaction with negation or double negation (DN), e.g. “Bucle Aurii spune: *Minnie nu a putut să nu coacă o pizza*. Donald se întreabă: *A copt Minnie o pizza?*” (“Goldilocks says: *Minnie was able to bake a pizza*. Donald wonders: *Did Minnie bake a pizza?*”).

Previous studies on (related) telicity/completion entailments indicate an adult-like behaviour on the part of children (Stoicescu, Dressler 2022). However, previous studies on implicatures (Noveck 2001, Stoicescu et al. 2015) show that 5-year-olds derive fewer implicatures than adults in truth value judgment tasks (TVJTs), though there is task variation. Consequently, if AEs

are semantic, we expect adult-like rates of AEs in children, while, if they are pragmatic, we expect fewer AEs. Regarding negation, previous studies suggest that DN is challenging for children (Thornton et al. 2016, Tagliani 2019). Thus, we expect Romanian children to have difficulties with DN in Romanian, a negative concord language, where DN is interpreted as negative in meaning.

Methodology

Participants

The study involved 40 native Romanian speakers: a test group consisting of 20 pre-school children between ages 5 and 6 (Mean age: 5;5), recruited from a kindergarten in Bucharest, and a control group of 20 adults between 24 and 37 (Mean age: 33), of various academic backgrounds.

Procedure

The experiment involved a truth-value judgement task, where participants had to help Donald figure out what Goldilocks was saying about other Disney characters: e.g., “Bucle Aurii spune: *Minnie nu a putut să nu coacă o pișcă.* Donald se întreabă: *A copt Minnie o pișcă?*” (“Goldilocks says: *Minnie was able to bake a pișcă.* Donald wonders: *Did Minnie bake a pișcă?*”). Participants could answer with *Yes/No/I don't know*. The task employed 16 critical items in 4 conditions: Affirmative (*Minnie a putut să* “Minnie was able to”), Negated Main Verb (*Minnie nu a putut să* “Minnie was not able to”), Negated Verbal Complement (*Minnie a putut să nu* “Minnie was able not to”), DN (*Minnie nu a putut să nu* “Minnie was not able not to”). The test conditions employed the implicative verbs *a putea* (“be able to”) and *a reuși* (“manage to”) followed by creation verbs (e.g., *a face*, “to make”) and change of state verbs (e.g. *a strica*, “break”). There were also 16 control items preventing a possible yes-bias. All items were used with perfective aspect to encourage AEs.

Results

Just like adults, children interpreted affirmative sentences as giving rise to AEs, while they gave a negative interpretation to sentences in the Negated Main Verb condition and in the Negated Verbal Complement condition. However, while adults mostly interpreted DN affirmatively, deriving AEs, children mostly interpreted it negatively.

The statistical data were fitted into a generalized linear-mixed (logit) model (*glmer*) with Answer as the Dependent Variable (coded as 1 if accurate, and 0 otherwise), Age as fixed effect and random slopes per Item and Participant. There was a significant difference between Groups only for DN ($\beta = 0.08043$, $SE = 0.02506$, $Z = 3.209$, $p < .01$).

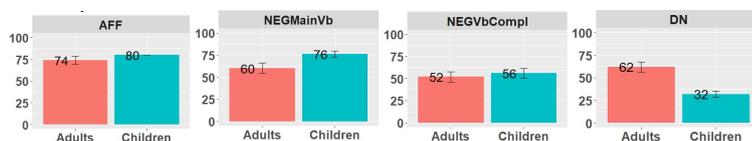


Figure 1. Rate of accurate answers (with SE) per group.
 Legend: AFF=Affirmative, NEGMainVb=Negated Main Verb,
 NegVbCompl=Negated Verbal Complement, DN= Double negation

Discussion

The current study shows that 5-year-old Romanian children are adult-like in their ability to derive AEs (“X did Y”) with implicative verbs in the affirmative condition and their ability to derive the opposite inference (“X did not do Y”) in conditions involving one single negation (either on the main verb or on the complement). If AEs were similar to *some not all* implicatures, then we would have expected them to derive fewer such inferences than adults, since children are known to have difficulties with *some not all* implicatures (Noveck, 2001, Stoicescu et al., 2015). However, we find the opposite result. Children’s ease with AEs suggests that AEs are best treated either as a semantic inference, which cannot be cancelled, or as a type of pragmatic implicature different from “some, not all”, perhaps of a more conventionalized nature (Bhatt, 1999). Nevertheless, children may have used different cognitive strategies than adults when agreeing with a sentence, such as *premature closure*, i.e., the tendency to choose one alternative out of several (Ozturk & Papafragou, 2015; Bleotu, Benz & Gotzner, 2021).

Regarding DN, our prediction that children will not derive AEs in DN contexts is met. Interestingly, children’s failure with AEs in DN contexts is not because of an inability to handle AEs, but because of interpreting DN negatively rather than affirmatively. This is in line with a general cross-linguistic negative-concord preference in child language.

Conclusion

Our study represents the first experimental study on AEs in child language in Romanian. We find that, just like adults, children are able to derive AEs in the affirmative and the opposite inferences in the negative, when negation is either on the implicative or on its complement. However, unlike adults, children are unable to interpret DN affirmatively and, consequently, they do not derive AEs in these contexts. Thus, children are at a developmental stage where they are not fully adult-like with respect to DN and entailment readings in such contexts. Further research is needed to clarify the exact semantic/pragmatic nature of AEs.

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